The Lettsomian Lectures
ON
THE AFFECTIONS OF THE URINARY APPARATUS IN CHILDREN.

Delivered before the Medical Society of London

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LECTURE II.[1]

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TUMOURS OF THE KIDNEY.

MR. PRESIDENT AND GENTLEMEN,—Amongst the post-mortem records of the Hospital for Sick Children, Great Ormond-street, already quoted there occur eight cases of primary sarcoma of the kidney. Three cases affected both glands, invading them from without, and have been described by Dr. Abercrombie.[2] Five other cases are mentioned as being retro-peritoneal in origin but directly or indirectly involving the kidney. In two instances the gland was secondarily affected with sarcoma which originated in other parts and in one by lymphadenoma. All the cases of primary sarcoma occurred in children under four years of age. One instance is recorded in which sarcoma commenced in the suprarenal and invaded the kidney. This happened in a boy aged eight years and four months. These observations concur with those of other writers. Dr. Windle[3] states that thirty-three out of forty occurred before the tenth year and of these thirty-three twenty-six were before the fifth year. Dr. Dickinson's tables show six cases under five years of age, none between six and twenty years. Sir William Roberts mentions twenty-five cases under the age of ten years; indeed, all except three under five years. Dr. Senator's statistics of ninety-six cases show fifty-eight males and thirty-eight females. In children under ten years 50 per cent. occurred during the first two years and 85 per cent. during the first five years. In Mr. Newman's tables 48 per cent. were under ten years of age. But by far the most complete analysis of this affection has been recently published by Dr. George Walker, of Baltimore, who has collected 142 cases. He finds that as regards sex they are fairly equally distributed and that the greater number occurred in children under four years of age. Dr. Starr out of fifty-four cases found nine under one year, seventeen between the ages of one and three years, eighteen between three and five years, six between five and eight years, and four between eight and twelve years, the sexes again being fairly equally affected. In a valuable statistical paper by Leibert, quoted by Dr. Money,[4] sixty cases were collated. Forty of the number died under the age of five years and twenty under that of two years. The sexes again were equally affected. Similar evidence is given by Mr. Taylor and other writers and it would seem established that these tumours are most frequent during the first five years of life and are fairly equally distributed between the sexes and perhaps occur rather more often on the left side than on the right. The size to which they may attain is enormous. In the Middlesex Hospital Museum is a specimen which was removed from the body of a boy, aged eight years, which weighed 31 lb., and one was reported by Sir Spencer Wells as having weighed from 16 lb. to 17 lb. The mean duration of the disease, according to Sir William Roberts, is in children nearly seven months, the minimum ten weeks, and the maximum over a year. The course of the disease appears to be longer the older the child.

Although some of the earlier cases are described as encephaloid it may be taken that the greater majority are sarcomata, though Birch-Hirschfeld and Mr. Sutton found adenomatous tissue in a large number, and the conclusions concerning them, which are summarised by Mr. Paul in an admirable paper,[5] may be accepted in full: (1) that these tumours show themselves generally during the first few years of life and are probably invariably of congenital origin; (2) they are primarily extrarenal, though usually extra-capsular, and distend and surround the kidney in preference to invading it; (3) they rarely cause marked urinary symptoms or much pain; death ensues from exhaustion or from pressure effects; (4) occasionally they give rise to metastatic growths, some infiltrate the kidney, all recur after removal; and (5) they frequently contain striped muscular fibre and embryonic renal tissue. Such growths he classes under one general title as congenital renal tumours closely allied to dermoids in origin. Considering the almost invariable malignancy of these tumours probably such a clinical title is as good as any that can be found and no great advantage is to be gained by naming them according to the prevailing cell elements, whether they be round or spindle shaped. The last variety, in which striated muscle appears, deserves, however, some special identification. Muscle fibres are found in connexion with tumours of other organs, such as the testis, but these rhabdomyomata of the kidney are of particular interest and probably find a true explanation of their origin in the views of Cohnheim, who, recalling the close relation of the first rudiments of the urogenital organs to the protovertebræ, suggests that by a faulty segmentation of these parts some of the germinal muscle cells may be mixed from the commencement with the cells constituting the rudiment of the kidneys and that these cells afterwards develop into a pathological new growth. All the cases described have occurred in children under eighteen months of age and in most of them both organs were affected. Mr. Eve's description of the specimen shown by him before the Pathological Society will serve for all. A large nodulated tumour with distinct capsule, the kidney tissue normal, the consistence uniform, yellowish white resembling myo-fibroma of the uterus. Microscopically, striped muscle arranged in fasciculi generally parallel, round and spindle cells in nodules among the muscular tissue. In a specimen shown by Dr. Dawson Williams from a child aged thirteen months the right kidney was involved and the tumour weighed 1 lb. 13½ oz., or one-sixth of the weight of the body.

The tumours of the kidney in childhood are therefore almost without exception malignant and the great majority are of the nature of sarcomata though a few bear affinities to the adenomata and in rare instances show pigmentation. They are by far the most frequent of all malignant tumours occurring in the abdomen in childhood and originate either from the cortex and invade the gland or in the perirenal tissue. Very rarely they commence in the adrenals, sometimes surrounding, sometimes infiltrating the whole of the kidney. By pressure the tumour may cause hydronephrosis and adhesions may be found to other structures. The pressure effects may cause ascites or œdema of the lower extremities. They are frequently bilateral. Neither traumatism nor antecedent disease has much to do with their origin. Occurring for the most part in very early life and confined at first to one side of the abdomen they present a smooth, rounded outline as distinguished from the sharp edge of an enlarged liver or the notched surface of an hypertrophied spleen. On bimanual examination they are found to be moveable but attached to the neighbourhood of the lumbar spine. They grow forwards and do not bulge in the lumbar region. Though dull on percussion, except where crossed by intestine, they are often so soft as to give an obscure sense of fluctuation and have thus been mistaken for ovarian cysts. They are invariably crossed by a portion of the colon and in an early stage are influenced by the movements of respiration. There is generally a space into which the fingers can be pressed between the upper margin of the renal growth and the ribs. So rapid is usually the advance of these neoplasms that they present only two symptoms in their earliest onset—viz., that of a large rounded tumour commencing in the loin, which most often is the first indication, and hæmaturia. In 12 per cent. this latter is said to be the primary symptom. Both might well in the earliest onset be mistaken as due to hydronephrosis or the presence of calculi in the pelvis of the

[1] Lecture I. appeared in THE LANCET of Feb. 12th, 1898. Lecture III. will be delivered on March 7th.
[2] Transactions of the Pathological Society, vol. xxxi.
[3] Journal of Anatomy and Physiology, vol. xviii.
[4] Transactions of the Medical Society, vol. x.
[5] Liverpool Medical and Chirurgical Journal, Jan., 1894.

kidney. But the nature of the swelling is soon evidenced by the rapidity of its increase and the hæmaturia differs from that resulting from calculous or scrofulous pyelitis in its abundance and its intermittence, the urine in the intervals being clear. It may be so abundant as to form clots in the bladder or ureter, when pain will occur as an additional symptom. If hæmaturia occur without an assignable cause the patient should be strictly watched for several weeks. By this means Israel found a growth very early and removed it successfully.[6] Cachexia does not appear until late and then the wasting is rapid and the effects of pressure become evident in dyspnœa, vomiting, and indigestion.

The conditions are few which give rise to any difficulty of distinction between these rapidly growing tumours of the kidney and those of other parts. Malignant disease of the suprarenals is rare and its results are similar to those in the case of the kidney, which is generally surrounded. The origin of such growths may be indicated by pigmentation of the skin and an abnormal growth of hair about the pubes and other parts of the body. A specimen of such a tumour is preserved in the Museum of St. George's Hospital and described in the Transactions of the Pathological Society, vol. xvi., and also by Dr. Dickinson: "A girl, three years of age, presented in the left hypochondriac region a hard, round, slightly moveable mass, of which the whole circumference could be traced. The skin was generally hyperæmic; it was gipsy coloured, though not bronzed, and was covered with a remarkable growth of dark hair. The tumour proved to be a globular mass of encephaloid six inches in diameter which had replaced the left suprarenal capsule. This lay immediately beneath the abdominal wall uncovered by bowel of any kind. It had pushed itself out of its proper place in regard to the kidney and lay along its inner edge close to the hilum, which with the tumour upon it was turned forward, the growth extending without interruption between the concave margin of the kidney and the abdominal front; thus the tumour had assumed the position but not the relations of a renal enlargement." The only distinction in this case was that no bowel lay in front of the swelling. Enlarged lymphatic glands form a moveable swelling which may closely resemble a renal tumour. At a meeting of this society in 1885 I exhibited a patient, aged ten years, with a hard, firm mass lying in the abdomen to the left and a little below the umbilicus. It had apparently some pedunculated attachment posteriorly, but it could be moved, especially towards the left flank. There was no pain and no abnormal conditions could be detected in the urine. Many opinions were offered as to its nature, but all doubts were solved when nine years later the youth, who had declined all suggestions of operative interference when first seen, came and requested me to remove the tumour, which had altered little in the interval. This was done and the young man afterwards entered the army. The swelling proved to be a mass of calcareous mesenteric glands.

Clearly the treatment of these cases resolves itself into the question of whether operation is justifiable or no. This has been examined by many able critics. Professor Gross in an admirable paper forbids the operation altogether. He states that of sixteen patients operated on for sarcoma between the ages of sixteen months and seven years seven survived and nine died, a mortality of 56·25 per cent., five died from recurrence in a few months, and of two others there is no further history. In the *Archives of Pediatrics*, February, 1893 Dr. Emily Lewi has tabulated sixty cases of nephrectomy for renal sarcoma in children. The operation mortality was 28½ per cent. But recurrence took place in nearly all the cases and at the time of writing only three cases had passed the three years' limit. Mr. Newman gives nineteen cases in patients under six years of age, thirteen died and six recovered from the operation, but the after-history is not given. Dr. Aldibert collected the results of forty-five cases; twenty deaths occurred soon after operation, two-thirds of them from shock. In eleven cases death was caused by recurrence within nine months. Mr Sutton has tabulated twenty-one cases of operation in children under six years. Most of these are identical with those of Mr. Newman. There were nine recoveries and twelve deaths; of those which survived the operation all were dead within a year. From seventy-four cases collected by Dr. George Walker he calculates that the ultimate mortality lies between 74·32 per cent. and 93·22 per cent. He mentions in his list of successful operations two remarkable cases. The first is by Israel, who removed an alveolar sarcoma from a boy aged fourteen years. The patient was well and strong five years later. Schmidt operated for sarcoma on a girl, aged six months, who was living and well four years later. Besides these are two cases by Dr. Abbé and one by Mr. Malcolm. The first of Dr. Abbé's patients was a child, aged thirteen months, where the tumour weighed 7 lb. and the patient after operation only 15 lb. The recovery was uninterrupted and three years after the operation the child was in perfect health. The second case was in a child, aged two years, and the tumour weighed 2¼ lb. This patient was in perfect health three years and nine months subsequently. The first case is the more remarkable in that the tumour is described as a rhabdomyo-sarcoma and that the kidney was ligated and a healthy portion of the gland was left. Mr. Malcolm's patient was a girl just under two years of age and the right kidney was removed through an incision in the right linea semilunaris. The tumour, which is preserved in the Museum of the Royal College of Surgeons of England, was examined by Mr. Targett, who pronounced it as being composed of tubules lined by columnar epithelium and collections of shorter epithelial cells arranged as if to form the lining membrane of a tube, but showing no lumen, a malignant adenoma. Here was found nothing resembling striped muscle cells nor any sarcomatous tissue. These cases are therefore not identical nor do they differ greatly from those tumours which had rapidly recurred after removal. Mr. Malcolm suggests that the success of his case may have been due to a free excision of the parts. The glands removed with the surrounding fat showed, however, no secondary deposit.

Mr. Thornton points out that renal sarcoma in children is more rapid and more quickly involves surrounding tissues, speedily recurs extensively and leads to an amount of suffering altogether beyond what is seen when the disease is allowed to run its natural course in the kidney. Mr. Butlin altogether opposes the operation in the case of children. Quoting the last three of the successful cases just mentioned Mr. Jacobson considers the opinion expressed by Mr. Butlin and Mr. Thornton as too pessimistic and suggests that as some growths are less malignant than others the operation may occasionally be justifiable. The older the patient and the smaller the tumour the greater is the probability of success. In the cases which have come before me I have only once felt justified in attempting to remove such a tumour, though I have more than once opened the abdomen in order to see the conditions and surroundings, and this I consider a justifiable proceeding, since it does nothing to hasten the patient's inevitable end and may give some hope of being able to proceed to the removal of the tumour. As to the choice of proceeding in the event of nephrectomy being decided upon, the lumbar operation gives a smaller mortality than the abdominal, but with no great difference. On the other hand, the latter gives more room for the removal of a large tumour and for dealing with bleeding vessels. Dr. Abbé in both his cases used a long transverse incision, placing the patient in Trendelenburg's position. Mr. Malcolm opened the abdomen in the course of the linea semilunaris and this has been more favoured by other operators.

RENAL AND VESICAL CALCULI.

The origin, development, and progress of calculi in early life have been investigated and described by so many excellent observers that I should be guilty of needless repetition were I to say much upon this subject. That a calculus may actually be formed during intra-uterine life is shown by the fact that one was found by Langenbeck in the kidney of a fœtus of six months, and Jacobi found six cases of congenital renal calculus in forty necropsies; but it is a matter of very frequent observation to find deposits of crystals in the cortical portions of the gland in new-born infants, which in the ordinary process are washed away by the fluid components of the mother's milk. These so called infarcts consist of amorphous urate of ammonium mixed with crystals of uric acid and are found occupying the straight tubes of the pyramids. In young infants they are due to the increased metamorphoses of tissue elements which must take place after birth in consequence of the newly inaugurated processes of digestion, respiration, and generation of heat (Dr. E. Smith). Ebstein believes that these uric acid infarcts of newly born children form the first stage of calculous production and that the large quantity of uric acid present in fœtal and early life explains the frequency of calculi of this substance. The abnormal elimination of

[6] Langenbeck's Archiv, Band xlvii., 1894.

uric acid leads to degeneration of epithelium which forms the animal basis of the calculus, which may remain in the tubules or pass into the pelvis and become enlarged by successive additions. The amount of uric acid in the urine of the new-born child has been proved to be greater than at any subsequent period of life. The proportion of uric acid to urea is said to be as much as 1 in 14 and consequently the crystals of uric acid and amorphous and crystalline urates are frequently found in abundance, and it is a matter of constant observation that these by their irritation may cause an excessive amount of disturbance even in very young infants, as evidenced by pain, anuria, and occasionally even by the presence of blood. But it is to the later manifestations of lithuria, or the uric acid diathesis, that attention is more seriously called and these are a direct result of the injudicious feeding of the infant. Independently of the actual development of calculus all the symptoms which indicate its presence in some part of the tract may be caused by an excessive amount of uric acid salts, and this excessive elimination, when continuous, is always evidence of a serious disturbance of nutrition. The urine is frequently of low specific gravity, often 1006, pale as water and containing very little urea. The explanation of the deposit lies in the small proportion in which the alkaline phosphates, the presumed solvent of uric acid, exist in the urine of infants. "In children," said Sir B. Brodie, "the deposition of lithic acid sand by the urine will not infrequently produce not only pains in the glans but bloody urine and all the other symptoms of stone in the bladder." Besides uric acid, oxalate of lime concretions are not infrequent as well as small calculi of the urates of ammonia and soda. The symptoms produced by these conditions are to be observed in children at a very early age and have been pointed out by Dr. Gibbons in his excellent paper on Renal Colic in Infants. No calculus is formed, but blood, mucus and crystals are found in the urine, and pain, tenderness and colic occur in the lumbar region. The patients are children of well-to-do parents who are invariably themselves gouty. Dr. Dickinson gives several instances of a similar condition occurring at about the period of teething and giving rise to hæmaturia. These cases he describes as scorbutic and in all the diet had been conspicuously wanting in fresh milk. That these symptoms are not always ascribed to their proper cause and are attributed to intestinal colic is due to the small amount of blood which passes with the urine so that attention is not directed to the kidneys and ureters as the site of pain. On the other hand this may sometimes be excessive. Dr. Abercrombie has given me the notes of the case of a boy, aged three years, who was admitted under his care for hæmaturia said to have commenced three weeks previously with pains in the legs, back and abdomen. The urine was deeply blood-stained, but not smoky or porter-coloured as it is in acute nephritis or hæmoglobinuria. Under the microscope nothing but blood corpuscles could be seen. The urine was always acid, there was no pain in micturition or at other times and the blood was equally diffused through the urine when passed. The symptoms completely disappeared after ten days, during which uric acid crystals were found in fair abundance in the urine as well as on subsequent occasions. These cases in fact bear a close analogy to what Sir Henry Thompson describes as uric acid storms in the adult. Besides hæmaturia pain is the most constant symptom, generally occurring suddenly and without warning, and referred to the lumbar or hypochondriac region and running down the course of the ureter towards the groin, the bladder, and the penis, and frequently causing retention of the urine; and this may exist to the extent of producing reflex irritation of an extreme character as in the case of a child described by Henoch who passed round fragments of the size of a pin's head which were recognised as uric acid concretions. She cried always before passing urine and developed first convulsions and subsequently contractures of the toes of both feet and of the fingers and knee-joints. The attacks will intermit with greater or shorter intervals and there is extreme tenderness to touch of all parts in the region of the kidney affected. It is, however, between the ages of two and six years (according to the tables of Sir Henry Thompson) that stone in the bladder is met with more frequently than at any age before fifty—that is to say, that the deposits from the tubules are more excessive soon after the first dentition when the organism is most in need of appropriate nourishment and most liable to reject those constituents which it cannot assimilate. The main sources of formation of salts in the urine of children were stated by the late Dr. Ralfe to be "indirectly from food by incomplete oxidation of the saccharine, amylaceous and oleaginous principles, and from increased tissue metabolism, and the blending of crystals to form a calculus is aided by the concentration of urine from deficiency in the amount of water secreted by the kidneys and further by the irritation excited by their presence in the pelvis, which sets up pyelitis, and the resulting secretion, aided by small hæmorrhages, agglutinate them into a calculus which receives constant augmentation in the kidney, the ureter, and the bladder.

As to the frequency of stone in the children of the poor Mr. Cadge agrees in the main with Sir T. Smith in attributing it to insufficient and almost arrested cutaneous excretion from imperfect clothing and uncleanliness tending to disturb the due proportions of the normal constituents of the urine and lead to a relative or absolute excess of some one constituent, while the digestive organs are constantly liable to disarrangement from unsuitable food or from irregularities in the mother's diet, and he lays much stress on the impossibility of these children obtaining a proper and sufficient supply of sound milk. Dr. J. A. Cunningham accounts for the prevalence of stone in India as being due to the mountain ranges of limestone bounding the districts in which it is of most frequent occurrence, the rivers depositing lime in the soil from which the drinking-water is drawn. Hot, dry summers inducing much perspiration, the urine consequently becomes concentrated and the salts crystallise out on any provocation, such as a diseased state of the urinary organs. Hot days and chilly nights are another predisposing influence, especially where clothing is insufficient. It is remarkable how frequently a stone may be latent in the kidney of a child and afford no evidence of its presence beyond the pyuria. This was pointed out by Dr. Gee in a paper read before the British Medical Association in 1883: "In other cases of stone in the kidney the diagnosis becomes possible when there are symptoms more or less like those of renal colic, when there are symptoms like stone in the bladder and yet no stone can be discovered, or where the kidneys can be felt by deep pressure." In the 2594 necropsies at the Hospital for Sick Children, Great Ormond-street, to which I have previously referred, I find that there were twenty-six cases in which calculi were lying in the pelvis or in the ureter. Seeing the much greater frequency of stone in the bladders of boys than of girls it is very remarkable that the majority of fourteen occurred in females; eleven were on the right side, nine on the left, five were on both sides, and in one case the side is not stated. The ages of the patients varied from nine months to nine years. Most of them died from affections not directly referred to the urinary apparatus and it may be presumed that in a large majority there were no symptoms pointing to the probable existence of calculus unless it were suspected from the existence of pyuria. In this list one case at least is not included—that of a boy, aged eight and a quarter years—upon whom I operated in 1892 for a calculus which was found blocking the commencement of the ureter. Nephro-lithotomy is, however, but rarely called for in children. One case is mentioned by Mr. Thornton where pain was referred to the left kidney which was found by means of an abdominal incision to be quite normal, and calculi were removed by a loin incision from the enlarged right gland. Two cases in which stones were successfully removed from a girl, aged eleven years, and a boy, aged three years and eight months, have been reported to me from the Pendlebury Hospital, and these are all the cases of operation that I have met with. It would thus appear that calculi are not infrequently impacted at the upper portion of the ureter, but seldom in any other part of its course. There are, however, one or two specimens in London hospital museums and notably one at the Hospital for Sick Children, Great Ormond-street, showing calculi impacted at the vesical end of the ureter, and others I shall refer to later. Dr. Eustace Smith observes that "where the concretion passes from the kidney into the ureter and downwards into the bladder there is always pain, but the child suffers far less than an adult would do under similar circumstances." This is certainly not beyond the truth, for in the investigation of a large number of cases of calculus vesicæ it is rarely possible to obtain any story of the passage of the stone from the site of its origin to that of its resting place. I have elsewhere described the case of a boy, aged ten years, who was handed over to my care by Dr. Barlow and who after a blow upon the loin suffered frequently from attacks of violent pain in

the lumbar region with occasional hæmaturia. Repeated examinations failed to detect any calculus and the symptoms subsiding he was discharged. Two years afterwards a small stone was found and crushed. It was probable that an effusion of blood into the pelvis of the kidney followed the blow upon the back and that some remaining portion of the clot became the nucleus of a calculus which remained for some time in the ureter, but ultimately passed into the bladder giving no symptoms of its later progress.

There is one symptom of calculus vesicæ in children to which full weight is barely given in the text-books, that is, the rough and almost gritty condition which the surface of the bladder presents to the sound when the symptoms of stone seem to warrant an exploration. This is constantly found to exist when no stone is present and when not even phosphatic concretion can be extracted. It is caused, I believe, by the extreme acidity of the urine exciting a spasmodic contraction of the muscular fasciculi of the bladder and throwing them into ridges and folds against which the point of the sound impinges. The condition is so frequent that it is one to remember as leading to a possibly mistaken diagnosis of stone, but it passes away as soon as the child has been kept warm in bed and the urine has been rendered less acid by means of drugs. Time and the improvement of modern instruments have greatly altered the views of surgeons of the present day with regard to the treatment of stone in the bladder of children. This change of front is due in great measure to the advocacy by Indian army surgeons, with their unrivalled experience, of litholapaxy in preference to any cutting operation. Successful as lateral lithotomy has proved in the hands of many surgeons there are still objections to its general adoption. According to Sir Henry Thompson the mortality varies during the period of from one to twelve or fourteen years from 1 in 11 or 1 in 28 cases or about 1 in 16. On the other hand, Mr. Bryant states that there were no deaths in 100 consecutive operations on boys at Guy's Hospital and the results of the operation upon natives at the hands of such surgeons as Surgeon-Lieutenant-Colonels Keegan, Freyer, Cunningham, and many others have given a very small mortality. Yet it is from these very surgeons that the strongest advocacy of litholapaxy comes. Besides the troubles incidental to a cutting operation, particularly hæmorrhage, which is often severe and difficult to check, there are many difficulties in lateral lithotomy which have proved formidable to the most skilful and practised surgeons. But the more serious objections are found in the later consequences, such as stricture, fistula, and sexual impotence. The late Mr. Greig Smith, in the latest edition of his work, said: "I have seen in the last nine years five operations for perineal fistula following perineal lithotomy and I have been concerned in the treatment of one case of stricture and one of fistula from the same cause," these occurring in a district where stone is far from frequent. Recto-vesical fistula is one of the most troublesome of accidents which a surgeon can be called upon to rectify and is certainly not an infrequent consequence of the operation. Although Sir Henry Thompson questions the possibility of injury to the vesicula by the knife, yet, difficult as it must necessarily be to obtain evidence on the point, there is much to warrant the belief that impotence in the adult not infrequently follows this operation in the child. Mr. Teevan reported four cases of sterile husbands among lithotomised patients. Langenbeck has called attention to the same danger and Dr. Keegan believes the operation to be frequently followed by emasculation. It must be remembered that the statistics of lithotomy are largely derived from the results obtained by Cheselden, Sir Henry Thompson, Mr. Cadge, and others, who had special opportunities of practising that operation just as Indian army surgeons have lately had of studying litholapaxy, but for those to whom the opportunity comes but seldom the lateral operation presents as many if not more dangers and difficulties as litholapaxy, which on the other hand has far fewer after consequences. On the other hand, it has been shown by Dr. Keegan that the objections urged against litholapaxy in children are really invalid, that the bladder of a boy gives ample room for the working of a small lithotrite and a medium sized aspiration tube, while the sensitiveness of the urethra is overcome by means of an anæsthetic. The liability to laceration of the mucous membrane of the bladder and urethra is theoretical and need not be feared if care and gentleness be exercised, and with regard to the smallness of the urethra he shows that if the meatus be divided the urethra of a boy from three to six years of age will admit a No. 7 or 8 lithotrite and of a boy of from eight to ten years a No. 10, 11, or even 14. The size of the urethra does not depend upon age. He advocates litholapaxy in male children principally for two reasons—rapidity of cure and the absence of a cutting operation.

With regard to the size of stones that have been dealt with by this method Mr. Freyer has removed a calculus weighing 808 grains from a boy aged nine years and Dr. Keegan one of 700 grains (uric acid) from a boy aged nine and a half years. The largest stones in the collection at the Hospital for Sick Children are a uric acid calculus encrusted with phosphatic material and weighing 229 grains from a boy aged two years and six months, a uric acid stone of 178 grains from a boy aged five years and five months, and one with a uric acid nucleus of 450 grains from a boy aged eleven years. All these were successfully removed by the lateral operation. Most recent writers are inclined to be converted to these views. "The operation of election for stone in the bladder," said Mr. Greig Smith, "is undoubtedly Bigelow's. Lithotrity is an operation at least as good as, possibly better than, lateral lithotomy, while as regards remote results there can be no comparison." Mr. Southam in describing two cases of lithotrity in boys of three and a half and ten years mentions that of all the eleven stones previously removed by him by lithotomy each might have been successfully dealt with by lithotrity. The objection raised by Mr. Jacobson as to recurrence after lithotrity is met by Surgeon-Lieutenant-Colonel Keegan's conclusions from an experience of 110 cases of his own, "that recurrence of stone does not follow litholapaxy in male children any oftener than it does lateral lithotomy provided the former operation is skilfully performed." The fenestrated lithotrites that are now employed render it possible to completely pulverise any stone which they are capable of grasping supposing that its components are not so hard as to risk injury to the instrument, and thus none but the smallest fragments are left in the bladder. These by the aid of the large sized evacuating tubes which can easily be passed into the bladder can be removed by repeated injections from the evacuator, so that nothing but the finest particles is likely to remain. The bladder of a child being much more sensitive than that of an adult would be much more ready to resent and to expel any fragment left, and from the undeveloped condition of the prostate and the absence of any depression or pouch behind it in which fragments could lie as well as the healthy state of the mucous membrane as compared to that of an elderly person there would be far less liability to formation of stone in the bladder. Any fresh calculus is much more likely to have descended from the kidney, seeing how frequently when found in that organ they are multiple. Again, as I have formerly pointed out, it is easy by a second washing out of the bladder after a few days' interval to minimise the possibility of any fragments remaining.

The suprapubic operation has, owing to recent improvements in the method of its performance, been rendered much less difficult than formerly and its dangers have been very greatly diminished. The higher position of the bladder in children and the small amount of tissue which intervenes between it and the transversalis fascia render it more accessible than in adults, while from the small size of the veins and the thinness of the fatty layer which overlies the bladder the amount of hæmorrhage is seldom great and can easily be controlled. The peritoneum is not often seen and can easily be avoided. With care in the extraction of the stone the wound of the bladder need not be large nor should it in ordinary circumstances be lacerated. One question which time only can answer with regard to this operation is the condition of the bladder in an old patient who has had suprapubic lithotomy performed during youth. A line of cicatrix in the anterior wall must necessarily interfere to some extent with the normal power of contraction of the viscus, and if in addition the cicatrix be adherent to the anterior abdominal wall, as in many cases it must be, not only is the shape of the bladder greatly altered but its power of expulsion must be considerably curtailed. As regards the recurrence of stone I published a case[7] in which I crushed a calculus weighing 130 grains which had formed in the bladder of a young man who exactly twelve months previously had undergone the suprapubic operation at the

[7] Clinical Journal, April, 1896.

Seamen's Hospital, when a calculus of 338 grains had been removed.

The subject of the treatment of stone in children has an extensive literature, which teems with statistics. These, however, are drawn either from the writings of surgeons who practised before the days of antiseptics or the introduction of litholapaxy or from the experience of Indian army surgeons upon native children, and are therefore open to objection on these grounds. For the sake of comparison, therefore, I have had collected, thanks to Mr. Templeton, the results of operations in children under twelve years of age from six hospitals in various parts of the kingdom during the last ten years.[8] These are as follows:

—	No.	Recovered.	Died.	Percentage of deaths.	Percentage of recovery.
Litholapaxy ...	49	45	4	8·1	91·8
Lateral lithotomy	17	16	1	5·8	94·1
Suprapubic operation ...	65	59	6	9·2	90·7
Totals	131	120	11	8·3	91·5

The percentage of recoveries after the lateral operation is nearly the same as in a collection of seventy-five cases operated on at the Hospital for Sick Children, Great Ormond-street, before 1890 and a little below that in the tables of Sir Henry Thompson (95·41) but above that of Mr. Charles Williams at the Norfolk and Norwich Hospital (93·73). The percentage of recoveries of the total number is, however, smaller than that in any of the three tables of the results of lateral lithotomy. Mr. Barling has collected[9] the results of the three operations in children under ten years of age:—

—	No.	Recovered.	Died.	Percentage of recoveries.
Litholapaxy	44	43	1	97·7
Lateral lithotomy...	50	48	2	96·0
Suprapubic operation ...	56	46	10	82·6
Totals...	150	137	13	91·3

This puts the suprapubic operations in a much less favourable light and gives to litholapaxy the highest percentage of recoveries of any of the three operations. These figures are of course too small from which to draw any definite conclusions. It may be presumed that in a certain number at least the suprapubic operation was selected in preference to either of the other alternatives on account of the size of the stone, the smallness of the pelvis, or for some other reason, and this would account for its showing a heavier mortality than the others. In a paper which I read before the Royal Medical and Chirurgical Society in 1890 I detailed the results of 114 consecutive operations for stone at the Hospital for Sick Children, Great Ormond-street. Out of 75 cases of lateral lithotomy there were 71 recoveries, a percentage of 94·6. Hæmorrhage, abscess, erysipelas, and orchitis were among the immediate casualties that followed the operation. To supplement the table in this paper there have been since its publication sixteen patients operated on for calculus vesicæ at the Hospital for Sick Children, Great Ormond-street, three by lateral lithotomy, all of whom recovered; seven by litholapaxy, of whom six recovered and one died; and six by suprapubic operation, of whom four recovered and two died. These are included in the first of the above tables, the death after lithotrity was due to pyonephritis and morbus cordis. One case which came under my own care was instructive. A boy, aged six years, was found to have a stone of moderate size which was easily seized with the lithotrite and a small amount of material was crushed, but the remainder was so hard that no impression could be made upon it and I desisted from further attempts from fear of breaking the lithotrite and at once removed the stone by the lateral operation. It weighed two and a half drachms, and was composed of oxalate of lime with a slight covering of phosphatic material which had been partly detached by the lithotrite.

Dr. White in an excellent article in Starr's Text-book of Diseases of Children, urges "that in every case of calculus in male children litholapaxy, on account of ease of performance, low mortality, speedy recovery, and absence of danger of emasculation, should be the operation of predilection." He quotes as the most recent statistics of the three operations those of Dr. A. T. Cabot. As all the cases were operated upon after 1878, and as they are classified according to age, they are especially valuable for the purpose of this paper. They may be compared as follows for children under fourteen:—

—	No.	Deaths.	Mortality.
			Per cent.
Suprapubic	591	74	12·52
Perineal lithotomy	539	16	2·96
Litholapaxy	241	4	1·66

I am, therefore, inclined to emphasise rather than to retract from the propositions offered in my former paper: (1) that in the cases of boys and girls stones of moderate size should be dealt with by litholapaxy; (2) that stones composed of oxalate of lime or of such size as not to be readily grasped between the blades of a lithotrite should be removed by the lateral operation in the case of boys; and (3) that the suprapubic operation should be reserved for stones of very large size or inconvenient shape in boys or girls, or cases of calculus embedded in a saccule of the bladder or impacted in the mouth of a ureter. That these propositions are not absolute must be evident. Cases have occurred to myself and others where the lithotrite cannot be introduced owing to some puckering of the mucous membrane of the urethra and the lateral operation may be forbidden on account of a narrowed and rickety pelvis, but I think it is proved by the above tables that the tendency of surgeons is, when possible, to use the lithotrite instead of the knife and that with proper care such a course is followed by the best results and is free from the after consequences of a cutting operation. At the same time it is not every surgeon who has had experience of the use of a lithotrite and to such must be left the choice of one of the other operations. In girls, unless the stone be very large, when it should be removed by the suprapubic operation, lithotrity is always easily available and it avoids the troublesome after-consequences of over-dilatation of the urethra or the danger of a vesico-vaginal fistula. The advice here given is entirely from the point of view of the patient, but to the practitioner who is called upon to deal with a stone and who has not had personal experiences of lithotrity it is difficult to offer suggestions. To see lithotrity performed by Sir Henry Thompson or some of those who have had large experience in India is like witnessing the feats of Roberts with a billiard cue. But the manipulative dexterity which is certainly essential is only acquired by a long apprenticeship and considerable experience. On the other hand the pitfalls of the lateral operation are many and often alarming to those who are not in the habit of witnessing or of performing it. The suprapubic operation is in itself simple and easy of performance and is probably that which under such circumstances should be adopted. At the same time, though I do not place much reliance upon statistics, it is the one that in the above tables presents the most unfavourable results, and in my own opinion and in the opinion of many other surgeons the results would appear still worse if it were possible to collect all the cases in which this operation has been performed in recent years. It must not be forgotten that where there is a stone in the bladder there is or has probably been some amount of pyelitis, and Mr. Southam in his relation of the two cases mentioned above gives some very good advice with regard to the previous treatment of the patient—rest in bed, milk diet, and sterilisation of the urine by boric acid or salol given internally, and if the urine contains much pus the bladder should be washed out thoroughly

[8] The hospitals from which these statistics were kindly supplied were the Hospital for Sick Children, Great Ormond-street; Manchester General Hospital for Sick Children; Leeds General Infirmary; St. Peter's Hospital for Stone, Henrietta-street, W.C.; Royal Hospital for Sick Children, Aberdeen; and Royal Hospital for Sick Children, Edinburgh.

[9] Brit. Med. Jour., March 9th, 1895.

more than once with an antiseptic solution. Shock should be avoided by thorough protection of the patient against surface chilling.

There must always be met with some rare cases for which the suprapubic operation is alone available, such as are indicated in the third of the above propositions. Such a case I related in THE LANCET of Oct. 22nd, 1887, in a boy, aged one year and four months, weakly, rachitic; symptoms of calculus had existed for three months and a stone was found on sounding which did not readily move in the bladder. The very narrow orifice of the pelvis, which was deformed by rickets, did not promise success to the lateral operation if performed. A suprapubic opening was made and a stone was felt lying in a sacculus in the region of the trigone below and between the orifices of the ureters and overlapped by the mucous membrane of the bladder to such an extent that it became necessary to raise the calculus from below by the assistance of the forefinger in the rectum. The stone was of uric acid, weighing fifty-three grains, and was of the shape of a blunted cone, the apex of which was buried in the walls of the bladder. The wound healed on the sixth day and the boy was discharged at the end of a fortnight.

URETERAL CALCULI.

In connexion with the impaction of calculi at the vesical orifice of the ureter my colleague, Mr. Pitts, has favoured me with two most interesting cases of this condition. A boy, aged nine years, was admitted to the Hospital for Sick Children, Great Ormond-street, with symptoms of stone in the bladder which were verified by the sound. On bimanual examination two stones were felt, one on each upper lateral portion of the bladder—that on the right side of about the size of an almond and fixed and that on the left moveable and of the size of a cherry-stone. The suprapubic operation was performed and a stone was removed of the size and shape of a plumstone. No other could be felt by the finger in the bladder, but on repeating bimanual examination a stone could be plainly felt in the position of entrance of the right ureter. Careful examination of this spot within the bladder revealed a protrusion of the mucous membrane and probing the apex of this protrusion a stone could be felt encysted in that part of the ureter which passes through the bladder wall. The mucous membrane was incised with scissors and the stone, which was pyramidal in shape, was made to project into the bladder by the finger of an assistant in the rectum. After very prolonged and careful manipulation it was finally loosened and extracted by aid of a bent director. It was about half an inch in its longest diameter, somewhat pyramidal in shape, with the apex projecting at the orifice of the ureter and the base firmly grasped by the surrounding structures. The wound united and the boy was discharged well in less than six weeks. A second case which was under the care of Mr. Pitts at St. Thomas's Hospital is of still greater interest and rarity. A thin cachectic child, aged four years, who had had symptoms of calculus vesicæ for two months, had been admitted to another hospital where he was sounded under an anæsthetic but nothing abnormal was found. The child became much worse and three months later came under the care of Mr. Pitts. There was then retention of urine, the bladder was distended to the umbilicus, the penis was swollen, great pain was complained of when the catheter was passed, and the urine was found to be very offensive, thick, and looking like pure pus, escaping very slowly through the catheter, in the eye of which a small stone was found. On April 6th a suprapubic incision was made. No stone was found, the wall of the bladder was much inflamed, and the surface of the mucous membrane was red and granular, with some indications of sacculation. A large drainage-tube was inserted and the patient was placed in a boracic bath. This was changed for boracic irrigation on the sixth day owing to signs of bronchitis. Six weeks later an attack of jaundice supervened which was followed by inflammation of the right testicle and cord. On June 30th the tube was still in the bladder and no urine coming through the penis. On July 18th an examination was made under chloroform. The bladder was found empty, but on rectal examination a hard nodular mass was felt on the left side between the rectum and the bladder. The cystotomy wound was enlarged and an ulcerated opening was found in the trigone of the bladder near the neck which led to a cavity outside the bladder which contained four oval stones that were with difficulty dislodged and manipulated from the pouch into the bladder and so removed. The largest of these calculi was of the size of a small plumstone. The boracic bath was repeated and the child made a good recovery. Mr. Pitts adds as a note to this exceedingly instructive case that in the absence of any stone on first opening the bladder and from the suppurative condition found, together with the subsequent inflammation of the epididymis and cord, the condition was for a long time believed to be tuberculous. Hence the delay in the second operation which resulted in finding the stones and curing the patient, a result which redounds to the credit of the surgeon. Such cases as these admit of no other treatment than by the suprapubic operation, which was clearly indicated beforehand in all of them.

CASE OF ANGIO-NEUROTIC ŒDEMA WITH HISTORY OF INJURY TO THE HEAD.

BY JOHN R. GIBSON, M.D., F.F.P.S. GLASG.

THE following case bears a resemblance to cases described by Quincke in the July number (1882) of the *Monatshefte für Praktische Dermatologie* under the heading of Acute Circumscribed Œdema and also of cases described under the same heading by Dr. W. Jamieson in the *Edinburgh Medical Journal* of 1883.

The patient, a man, aged fifty-two years, of sober habits and good family history, twenty years ago met with an injury to his left temple from a falling plank of wood. He was rendered unconscious for a short time. The forehead was cut and the bone injured; at present there is a cicatrix which is adherent to the bone. After this injury he became liable to periodic attacks of sickness and acid vomiting accompanied with pain at the seat of the injury of a throbbing character and a chilly feeling. These dyspeptic attacks had no reference to his diet or any indiscretion. They lasted at most two days, when he got well. This state of matters continued, defying medical treatment, until four years ago there was added another feature of the case—i.e., a skin eruption. Concurrently with the pain in the head, dyspepsia, and chilly feeling he noticed one or both arms to get blanched and to assume the cutis anserina appearance, often lasting an hour or two, to be followed by raised erythematous patches of the size of from half-a-crown to three inches in diameter, a favourite spot for the eruption being the flexor surfaces of the elbow or wrist and the skin surrounding the eye. These raised spots had a tingling sensation, but were not itchy, and lasted from one and a half to two days when they very rapidly disappeared. The patches were always of an erythematous colour. This condition has lasted—with the exception, as pointed out by Quincke, of assuming a milder form—for over four years in spite of a great variety of treatment, nothing having the least effect upon the disease. The disease is worst in cold weather (when he has to cease work) or when he experiences a chill. His mucous membranes are occasionally affected, as the palate, also the pleura, as shown by pain in the left mammary region and friction sound during the attack which is unaccompanied by fever and disappears concurrently with the skin eruption.

The chief point of interest in this case is the history of head injury followed by the periodic attacks of sickness and this in time to be followed by the circumscribed œdema. Quincke regards the condition as a vaso-motor neurosis, under the influence of which the permeability of the vessels is suddenly increased—a view which the head injury in this case would seem to support. The gastro-intestinal catarrh is due to the same cause. The disease is sometimes associated with rheumatism, but the patient under my care has never had rheumatism or a family history of rheumatism. The following drugs were tried in this case alone and in combination and, as before said, without influencing the disease in the least—arsenic, strychnia, atropine, antipyrin (in large doses), phenacetin, quinine.

Paisley.

ON PYLOROPLASTY, WITH ABSTRACT OF ELEVEN CONSECUTIVE CASES.

BY RUTHERFORD MORISON, M.B. EDIN., F.R.C.S. EDIN. AND ENG.,
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IN THE LANCET of Feb. 16th, 1895, and Oct. 24th, 1896 (where four cases are recorded), and at various medical society meetings I drew attention to the advantages of pyloroplasty. Since that time no cases in abdominal surgery have given me so much satisfaction. It is because I believe that the safety and advantages of this operation are not yet sufficiently realised by the profession that I am venturing once more to draw attention to the subject. Pyloroplasty is without rival in cases of strictured pylorus. I cannot say anything from personal experience of Loreta's operation, but a knowledge of the pathology of these cases teaches that stretching in the majority of instances would be dangerous and generally useless. The same lesson has, I believe, been learned by surgeons who have practised this operation sufficiently often. Gastro-enterostomy as ordinarily performed is still worse. In the surgical section of the British Medical Association annual meeting, 1893,[1] I remarked: "If a large opening is made between the stomach and jejunum there is every reason why the intestinal contents should regurgitate into the stomach unless that viscus offers some resistance. Into the dilated stomach intestinal contents pass easily and fill it up. The stomach when in a fairly healthy state is tonically contracted, its walls lying firmly apposed when empty and embracing their contents when full." At the same meeting I exhibited specimens bearing on this statement which increased experience has confirmed. Whether this explanation be accepted or not it is a fact that in four cases of much dilated stomach on which I have performed gastro-enterostomy by the accepted methods death resulted a few days after the operation from constant vomiting of intestinal contents, and the vomiting in each case was not prevented either by posture or frequent washing out. Post-mortem examination demonstrated in each that the principle of the operation was at fault and not the technique, for union of the visceral and parietal wound was perfect and nothing was found to account for death except the regurgitation of intestinal contents into the stomach. In addition to my own experience I have had the opportunity of observing similar results in the hands of other surgeons, so that I feel justified in making strong objections to this operation in the class of case now under consideration.

I have performed pyloroplasty in eleven cases;[2] all recovered. Ten are now alive and in perfect health. Eight of the ten (Cases 1, 3, 5, 6, 7, 8, 10, and 11) are striking results; from a condition of the most feeble, miserable invalidism they rapidly rose to robust health. Case 2 (previously recorded in THE LANCET of Oct. 24th, 1896) relapsed from fresh gastric ulceration after the operation, but is now well; and Case 9 had not suffered sufficiently long to be markedly feeble or emaciated when the operation was performed. Case 4 (recorded in THE LANCET of Oct. 24th, 1896) died eighteen months after the operation from cancer of the pylorus. An early malignant stricture was mistaken in her for the ordinary simple stricture of the pylorus (and treated by pyloroplasty); and as yet I know of no certain method of distinguishing clinically (even after abdominal section) a commencing malignant stricture from the ordinary cicatricial one. I have previously pointed out that a long history is against malignancy, but in this case the patient had been troubled with indigestion all her life. Adhesions and scarring would also be in favour of an inflammatory rather than a malignant lesion. A moveable nodular pylorus of the size of a walnut or larger is probably infiltrated by malignant growth, as it is seldom that an inflammatory swelling remains so localised and reaches such a size. Nevertheless, on Aug. 3rd, 1897, I excised a pylorus forming such a tumour from a man of middle age with a history of only ten months' illness and rapid emaciation. Before and after opening his abdomen the tumour was diagnosed as malignant; not until it was split open and its interior exposed was it suspected that the diagnosis might be wrong. A typical punched-out ulcer surrounded by a large mass of inflammatory origin was the cause of all this mischief.

In two cases I have opened the abdomen expecting to perform pyloroplasty but found that in one it would be useless and in the other impossible to do so. The first case was that of a middle-aged man with a typical history and the starved, emaciated appearance of pyloric stricture of long standing due to gastric ulcer. On opening his abdomen the pylorus was found to be buried and attached to the pancreas by firm adhesions and there were two yellow-coloured glands of the size of filberts in the gastro-hepatic omentum. The glands and what I took to be the pylorus to which one of them was attached were separated and excised together. On examining the portion of viscus removed and the cut surfaces left it was discovered that the first portion of duodenum had been removed and the pylorus, which was much contracted, left. I then split the pylorus and attached it to the cut duodenum. In separating the dense adhesions I wounded the pancreas and to this I attribute the patient's death on the sixth day after operation. He died from acute perforating peritonitis probably due to digestion of the newly-formed lymph by escaped pancreatic juice. Numerous old cicatrices of round ulcers were found (post mortem) in the neighbourhood of the pylorus, which was a little thickened. A portion of the pylorus and the glands were examined microscopically and found to be infiltrated with columnar-celled carcinoma. The second case also was that of a middle-aged man with the typical appearance and signs of pyloric stenosis. No tumour could be felt, but his pylorus was found to be buried in dense adhesions. A vigorous attempt was made to separate the pylorus, but the adhesions were so thick and firm that the notion of performing pyloroplasty had to be abandoned. Gastro-enterostomy was performed by a new method, which I hope to show at a later date is applicable to such cases. For the two days following operation the patient occasionally brought up mouthfuls of green, stinking fluid, evidently bile and pancreatic juice, but after a Seidlitz powder in hot water the regurgitation finally ceased. On the fourth day he appeared to be safe. On the fifth day the symptoms and signs of acute peritonitis developed and on the seventh day after operation he died. Post-mortem examination showed that death was caused by general septic peritonitis due to leakage from a hole the size of a pinhead outside of an active ulcer in the stomach close to the pylorus. The hole had been made and overlooked during the attempt to separate the adherent pylorus. The duodenum down to immediately above the opening for the bile and pancreatic ducts was scarred by recent and old ulcers. The pancreas, duodenum, and pyloric end of the stomach were inseparably united by dense adhesions. All the new openings were very firmly united and watertight. I have included these two cases to make my record of pyloroplasty complete and to illustrate the fact that both diagnosis and operation may sometimes be impossible. Nevertheless, in the great majority a diagnosis of those suitable for the operation is easy. The most promising are those in which a moveable nodule can be felt in the neighbourhood of the pylorus; in addition the ordinary symptoms of chronic dilatation are present—viz., vomiting of large quantities of yeasty fluid at intervals and the well-recognised disturbances of chronic dyspepsia, chiefly vertigo, pronounced constipation, depression of spirits, marked emaciation, and loss of appetite. In these cases the operation is as safe as any in abdominal surgery; the moveable pylorus makes it so easy that it can be performed in less than half an hour, and the after results are a surprise to those unaccustomed to watch such patients. Every case in which dilatation of the stomach is a marked feature, with a history of failing stomach powers, should, I believe, be explored with a view to operation. It will seldom be found that the diagnosis of strictured pylorus is wrong or that pyloroplasty will fail to bring about complete relief of all symptoms and a restoration to health.

With regard to the pathology my opinion[3] that most of the cases of pyloric stricture "are due to cicatricial contraction following ulceration" is confirmed by further experience

[1] Brit. Med. Jour., 1893, vol. ii., p. 149.

[2] Since writing the above I have successfully operated on a twelfth case.

TABLE OF ELEVEN CONSECUTIVE CASES OF PYLOROPLASTY.

No.	Sex and age.	Date of admission.	Alcohol.	Previous health.	Date of onset of symptoms.	Date of onset of vomiting.	Frequency of vomit.	Amount of vomit.	Nature of vomited matter.	Date of onset of pain.	Situation of pain.	Character of pain.
1	F., 48.	Oct. 4th, 1894.	0	For 20 years has suffered from indigestion.	5 years ago.	5 years ago had vomiting every 2 or 3 months.	Latterly every 2 or 3 days; for last 14 days almost continuously.	Large quantities; more than amount of food taken.	Frothy, yeasty, and foul smelling.	4 to 5 months.	Umbilical region.	Severe before vomiting.
2	F., 37.	Oct. 11th, 1895.	0	Good until 8½ years ago; 8½ years ago miscarriage; 8 years ago dropsy; 4 years ago typhoid fever.	8 years ago had vomiting after food.	8 years ago.	Occasional after food until 7 months ago, when it became almost incessant.	Occasionally large quantities; generally only food she had eaten.	Yeasty and foul smelling; sometimes black or red.	3 months ago.	In stomach.	Relieved by vomiting.
3	M.	Jan. 1st, 1896.	0	Typhoid fever at 10 years of age.	3 or 4 years.	3 or 4 years.	3 attacks every 24 hours, sometimes immediately after meals.	Large quantities.	Like soapsuds.	Not so long ago as the vomiting.	In stomach.	Sometimes severe, at other times an uneasy feeling after taking food; great relief by vomiting; does not feel sick before vomiting.
4	F., 50.	April 11th, 1896.	0	Always been troubled with indigestion.	14 months ago had pain in stomach and sometimes diarrhœa.	6 months ago.	After food "off and on."	Large quantities; more than food taken.	Sour, bitter, and watery-looking; no blood.	6 months ago.	In stomach.	Relieved by vomiting.
5	M., 38.	Feb. 22nd, 1896.	Hard drinking over a fortnight for 13 years before illness.	Good.	6 years ago.	15 months ago.	Generally immediately after food; sometimes only every 2 or 3 days.	Very large quantities when the vomiting is not frequent.	Greenish, frothy, and sour-tasting fluid; much foul-smelling gas.	15 months ago.	In epigastrium.	Severe.
6	M., 32.	June 25th, 1896.	When he could freely.	At 8 years of age had scarlet fever; between the age of 21 and 29 years had ague and dysentery in India.	2 years ago.	2 years ago.	About 10 mintes after meals.	Sometimes large quantities.	Frothy and brownish-yellow; sarcinæ and torulæ.	2 years ago; continuous during last ten weeks.	In epigastrium.	Severe after food at first and relieved by vomiting; latterly vomiting constant, uneasiness much increased by solid food.
7	M., 25.	Oct. 8th, 1896.	0	Scarlet fever when young.	12 years ago had pain in stomach after meals.	9 years ago had vomited a pint of blood	For 4 years has vomited large quantities of undigested food, more often latterly.	Large quantities.	Occasionally like coffee-grounds.	2½ years ago.	In stomach.	Severe after food.
8	M., 56.	Dec. 1st, 1896.	0	Always very delicate stomach; careful diet.	15 years ago; in bed 6 weeks with pain in stomach; could take fluids only.	During past 8 months.	Only vomited twice.	Nothing exceptional.	—	8 months ago.	In stomach.	Severe after meals, with full, heavy feeling.
9	M., 42.	March 25th, 1897.	Freely.	Always good.	9 years ago.	9 years.	Food often vomited immediately after taking it.	Not much more than food taken.	Watery, bitter, and slimy.	No severe pain.	In epigastrium.	Dull, heavy feeling.
10	M., 56.	Aug. 31st, 1897.	0	For 25 years has had a delicate stomach, with fits of severe pain always in epigastrium.	12 months.	12 months.	Every two or three days.	Very large quantities.	Sarcinæ.	12 months.	In epigastrium.	Constant uneasiness, severe after food; relieved by vomiting.
11	F., 30.	Sept. 6th, 1897.	0	For 12 years attacks of pain in stomach and constipation.	8 years ago.	8 years ago.	After food; ceased when she was pregnant seven years ago, but recommenced after labour.	Large quantities. "Does not know where it all comes from."	Watery and frothy; a scum on top; smells and looks like yeast.	8 years ago.	In stomach.	Two sorts of pain: (1) a burning after food; and (2) when stomach is full like labour pain, relieved by vomiting.

SUBSEQUENT HISTORY.

CASE 1.—Mr. Sheraton reports Aug. 3rd, 1897, three years after operation: "She weighs 10½ st. and enjoys perfect health."

CASE 2.—Dr. Buncle reports Sept. 30th, 1897, two years after operation: "Her digestive capacity seems perfectly normal. Her general health is good."

CASE 3.—Dr. J. R. Sutherland reports, Sept. 29th, 1897, twenty-one months after operation: "He is keeping in good health and has no stomach trouble whatever."

CASE 4.—Mr. F. G. S. G. Martin reports, Nov. 28th, 1896, eighteen months after operation: "There was no doubt that [the patient] died of a malignant tumour the growth of which was very rapid during the last six weeks of her life. Could not get a post-mortem examination."

CASE 5.—Twenty months after operation the patient showed himself at the infirmary. He could eat and digest anything and was doing regular heavy work as stoneman in the pit.

CASE 6.—Eight months after operation he called at the infirmary. He was in perfect health and could eat anything. He has not been seen since.

TABLE OF ELEVEN CONSECUTIVE CASES OF PYLOROPLASTY—(*continued*).

No.	Whether there is swelling of abdomen.	Situation of swelling.	Evidence of dilatation of stomach.	Date of operation.	Nature of lesion found before operation.	Nature of lesion found at operation.	Ordinary weight.	Date of onset of wasting.	Weight at time of operation.	Present weight.
1 (continued)	Considerable before vomiting attacks.	In umbilical and epigastric regions.	Succussion and visible distension.	Oct. 16th, 1894.	Lump the size of a walnut can be picked up between finger and thumb above and to the right of the umbilicus.	Pylorus felt like a walnut; internally would not admit closed hæmostatic forceps.	7½ st.	—	5 st. 1 lb.	10½ st.
2 (continued)	After food.	In stomach.	Succussion and increased resonant area.	Oct. 17th, 1895.	No lump or nodule.	Lesser curvature of stomach adherent to parietes; pylorus and duodenum with omentum bound down and closing foramen of Winslow; pylorus red and œdematous; hard nodules of cicatrix in posterior and upper wall of pylorus; admitted tip of little finger.	15 years ago, 10 st.	—	8 st. 12 lb.	9 st. 11½ lb
3 (continued)	When stomach is full there is a painful lump as big as a cocoanut.	Rather to the left of the umbilicus.	Succussion; stomach holds 4 pints of fluid.	Jan. 3rd, 1896.	Something indefinite to be felt under the right rectus muscle to the right and above the umbilicus.	Hard nodular mass surrounding pylorus which admitted tip of forefinger; colon adherent to the front of the pylorus.	9 st.	Gradual from commencement of illness.	7 st. 6 lb. 5 oz.	10 st.
4 (continued)	Always before vomiting.	In stomach.	Enormous distension with Seidlitz powder; succussion and percussion.	April 12th, 1895.	Very tender and hard nodule as big as a walnut to the right of the umbilicus; moveable and descends with inspiration.	Pylorus hard and nodular; white scar on front surface; no adhesions; pylorus admitted tip of little finger.	—	—	5 st. 7 lb. 4 oz.	—
5 (continued)	Stomach gathers up into a lump at times.	Epigastrium.	Succussion; Seidlitz powder; more fluid returned than was put into the stomach.	March 3rd, 1896.	Nothing to be felt over the pylorus.	Ulcer found on the posterior wall of pylorus and cicatrices of others present; pylorus tight; admitted closed hæmostatic forceps.	10½ st.	15 months.	7 st. 5 lb.	11 st. 8 lb. Sept. 2nd, 1897.
6 (continued)	Yes.	Under upper part of the right rectus muscle; rises and falls with respiration.	Reached from the ribs to the umbilicus.	Aug. 11th, 1896.	No lump; under chloroform a distinct nodule could be felt at times previously to operation.	Externally pylorus appeared and felt normal; internally pylorus admitted only the tip of hæmostatic forceps.	10 st. or 11 st.	2 years ago.	6 st. 4 lb.	11 st. (?)
7 (continued)	Great swelling.	In umbilical region.	Visible hard swelling when the stomach is manipulated.	Oct. 10th, 1896.	No lump or nodule.	Cicatrix on anterior wall of stomach near pylorus adherent to omentum and colon; pylorus represented by a thin band as big as a crow-quill; admitted a director.	9 st.	2½ years.	6 st. 1 lb.	9½ st.
8 (continued)	Swells towards night.	In stomach region.	Marked succussion.	Dec. 3rd, 1896.	Rounded nodules of the size of a filbert indistinctly felt on deep inspiration to the right of linea alba, between umbilicus and ensiform cartilage.	Pylorus adherent behind to considerable nodular tumour like hard pancreas; in stomach the pylorus felt like hard, firm ring; admitted tip of little finger.	11 st.	—	8½ st.	11 st.
9 (continued)	Swelling after meals.	In upper part of the abdomen.	When distended with Seidlitz powder stomach reaches below umbilicus. Splashing.	March 27th, 1897.	Occasionally a small nodule felt.	Tight narrow-edged ring at pylorus which gripped the tip of forefinger; pylorus could not be felt in this condition externally. Had it been spasmodically contracted?	11½ st.	Lost weight rapidly lately.	10 st. 5 lb. 5 oz	11 st. 7 lb.
10 (continued)	No.	—		Sept. 3rd, 1897.	Painful spot to the right of the umbilicus.	Omentum adherent to pylorus; pylorus admitted tip of Spencer Wells's forceps; pylorus hard and harsh to the touch; active ulcer above and behind close to the pylorus.	9 st. 10 lb.	12 months.	8 st. 6 lb.	10 st. 13 lb.
11 (continued)	A hard swelling before vomiting.	In stomach.	Dilatation can be seen when peristaltic movements are present.	Sept. 13th, 1897.	A hard nodule immediately to the right of the umbilicus, freely moveable from side to side and from above downwards.	Pylorus hard, puckered, and cicatrix on outside; inside admitted small closed pair of hæmostatic forceps.	8 st.	8 years.	Very thin (? 8 st.).	9 st. ½ lb.

SUBSEQUENT HISTORY.

CASE 7.—Dr. Graham Miller reports, Oct. 7th, 1897, one year after operation: "Everything agrees with him. His general health is excellent. He has been at work regularly for 5 months."

CASE 8.—Mr. W. Tiplady reports, Nov. 16th, 1897, eleven months after operation: "Enjoys good health and strength. Has no trouble with digestion."

CASE 9.—Mr. J. Smale reports, October, 1897, seven months after operation "Patient is in a good state of health and is careful as to diet. He digests and sleeps well and takes lots of exercise. Stomach still somewhat large."

CASE 10.—Two months after operation Dr. P. Pearcey and I saw him. He can eat and digest anything and is getting fat.

CASE 11.—Two months after operation she was seen at the infirmary. She has no trouble whatever with the stomach and has gained 1½ st. in weight.

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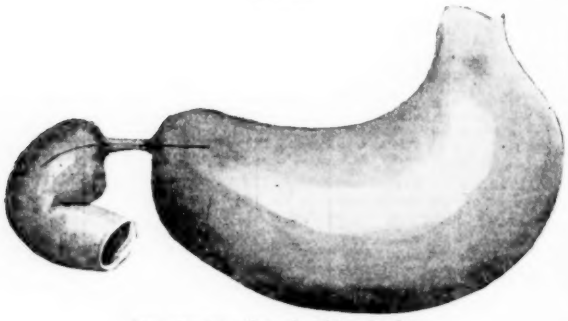
and in some of the cases alcoholic abuse seems to have acted as an exciting cause of the pyloric ulcer. I have only to add to this that spasm of the pyloric sphincter is probably superadded to the organic lesion in some instances. In Case 6, for example, it was noticed that a distinct nodule could be felt at times but not always. Under chloroform the nodule was not apparent and the pylorus when palpated after opening the abdomen felt normal and looked externally as if nothing was wrong with it, though a tight stricture was found to be present on opening the stomach. I showed the case before the Northumberland and Durham Medical Society in October, 1896. My words then express my established opinion. "No such amount of cicatricial change was found in Case 6 as would account for the tight stricture of the pylorus; the varying nature of the abdominal lump and the disappearance of all hardness under the anæsthetic point to some other cause than cicatricial contraction for the condition. The case suggests to me the possibility of 'spasm' taking some part in the production of the pyloric stricture; also a small ulcer, as in the case of the anal sphincter, may be considered a not improbable cause. Any disturbance of the complicated nerve mechanism involved in the stomach movements during digestion, by which the expulsive movements are stimulated and the pyloric sphincter inhibited at the same time, appear to be as likely a cause of digestive troubles as many of the obscure conditions described in text-books on the subject. In support of the muscular spasm theory it may be added that there is some amount of evidence in favour of the view that long-continued contraction of unstriated muscle may lead eventually to organic stricture."

FIG. 1.

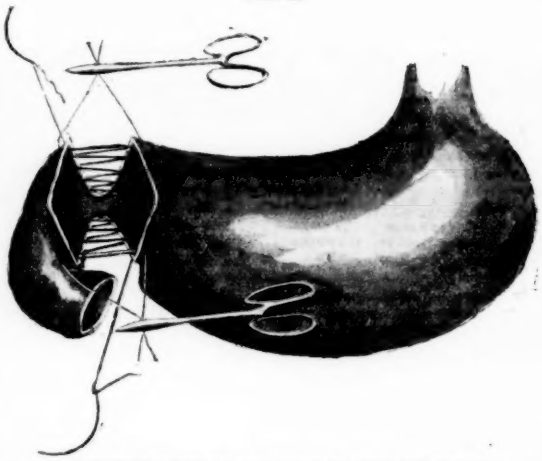


Line of incision through strictured pylorus.

Attention to detail is essential to success (in this as in any other operation). I shall therefore shortly describe the method I have adopted of preparation of the patient and the after treatment and add a few notes on the operation itself.

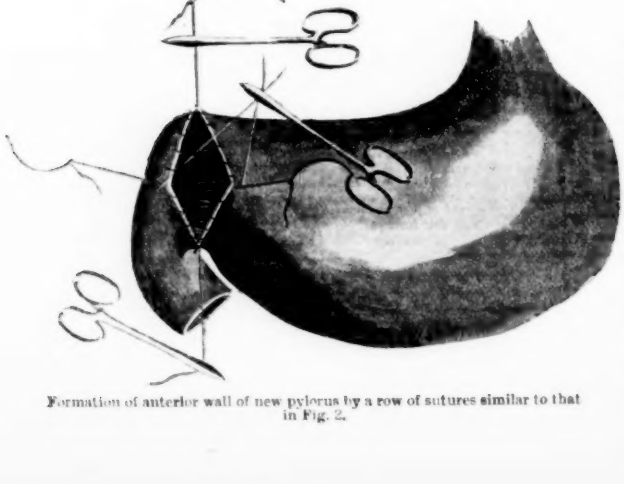
For three or four days before the operation my patients are kept warm in bed. Their starved, weak condition makes this usually a relief. During this time they are only allowed a wineglassful of equal parts of milk and barley-water every hour and some medicine to cause free intestinal evacuations. Five grains of calomel and after a rest of six hours sulphate of magnesia (in one-drachm doses) is given every two hours till the bowels are freely moved.[1] Half an hour before the operation half an ounce of whisky in half an ounce of water is administered. The patient, operator, and assistants are prepared as for an ordinary aseptic operation. The operation as described in THE LANCET of Feb. 16th, 1895, p. 396, is then performed in ordinary cases. I have only to add to that description that the inner suture which passes through all the coats of the duodenum and stomach is a continuous one of catgut specially prepared; its sole object is to make the junction water-tight. Outside of this line a row of interrupted

FIG. 2.



The longitudinal incision has been converted into a transverse one and the continuous suture when drawn tight will form the posterior wall of the new pylorus.

FIG. 3.



Formation of anterior wall of new pylorus by a row of sutures similar to that in Fig. 2.

[1] Washing out the stomach is sometimes useful from a diagnostic point of view, for in addition to the usual arguments in its favour that it enables an examination of the contents to be made and the amount of dilatation to be roughly gauged, in two cases when recent ulcers were found washing occasioned considerable pain after a certain amount of water had been introduced. Unless, however, the stomach has been accustomed to lavage I do not wash it out, as the operation is always unpleasant, serves no useful purpose so far as the coming operation is concerned, and is perhaps not always so free from risk as we have been accustomed to regard it. This point was suggested to me by the case of a middle-aged man who was admitted to the infirmary under my care for operation. He was a sturdy-looking short man with a much dilated stomach and saremous vomiting, apparently an excellent case for operation. Immediately after being washed out he felt relieved, but shortly after complained of feeling sick and weak. Three days later I found him very ill. He had frequently vomited, had passed only two ounces of urine in the three days since being washed out, and though heavy and somnolent was restless. His bladder was found to be empty. We supposed that his kidneys were at fault and that his condition might be due to uræmia. Eight days after the washing out he died comatose. Post-mortem examination showed a tight pyloric stricture the result of old ulceration, a hugely dilated stomach, and nothing else. All his other organs were sound.

Lembert's sutures of fine silk is introduced with the object of burying the first. This simple form of suture I have advocated and used, to the exclusion of every other, for some years in all sorts of stomach and intestinal work and know that entire reliance may be placed upon it. It may be well to add that the opening into the duodenum and even the duodenum itself in the later stages of the operation may be difficult to recognise unless special precautions are taken to make its relation clear before the suturing is commenced. For this purpose temporary sutures, for a knowledge of which in intestinal surgery I am indebted to Mr. F. Caird, of Edinburgh, are very useful. They only need to be drawn out when the permanent suture is completed. But the operation is not always so simple, adhesions sometimes make it impossible, as in one of the cases related, or remarkably difficult, as in Case 3, when the colon was opened by mistake in separating dense adhesions. Still another difficulty was met with in Cases 5 and 8, illustrated in the annexed diagram, for which I am indebted to Dr. W. G. Richardson, who has assisted me at most of the operations. In these cases the stomach was attached to the duodenum by a narrow channel of practically no use (when laid open) for forming any important part of the new pylorus. The diagrams show how this difficulty was overcome. In Fig. 1 the narrow channel connecting the stomach and duodenum is shown. The thin black line represents an incision passing through from one to the other. In Fig. 2 the longitudinal incision has been converted into a transverse one and is held by temporary sutures in clip forceps. The continuous suture (of catgut through all the coats) introduced from within outwards has completed the posterior wall of the new pylorus when drawn tight. In Fig. 3 the anterior wall of the new pylorus is being made as in an ordinary pyloroplasty by a continuous suture (of catgut through all the coats) introduced from without in. A row of interrupted Lembert's sutures outside of the ring completes the operation. This outer row of sutures must tuck in and bury each end of the inner line before the middle is completed, for if the sutures be applied from one end throughout the last portion left forms an ugly tense angle difficult to deal with and in which the blood-supply is most defective.

In two other cases (Cases 5 and 10) another complication was met with. On opening the pylorus (in each) a circular active ulcer was found close to the pyloric ring. In Case 5 the ulcer was rather larger than a sixpenny piece; in Case 10 rather less than a threepenny piece. In both the ulcer was cleansed, its walls scrubbed with antiseptic gauze and covered up by drawing the mucous membrane over it by interrupted sutures of catgut.

With regard to the after treatment it scarcely needs description, for it is that of an ordinary abdominal case. For the first twelve hours rectal enemata of two ounces of milk, two ounces of beef-tea, with a small quantity of salt (and stimulant if required) are administered every two hours and two teaspoonfuls of hot water by the mouth. After twelve hours a teaspoonful of milk and barley-water in equal parts is given every hour and the quantity gradually increased after a few hours. On the fifth day some thin arrowroot is allowed with milk, which is now taken in fair quantity, and if it has been necessary to continue the rectal enemata so long they are now given up. By the end of the week milk puddings, soup, and eggs can be taken and in a few more days ordinary diet. On the fifth day five grains of calomel followed in four hours by a soap and-water enema move the bowels. On the tenth day the dressings are taken off for the first time and if the skin sutures are not of catgut the stitches are then removed. Next day the patient gets up.

A few points about the convalescence are of interest. It is quite exceptional that patients are sick either from the anæsthetic or otherwise after this operation. The vomiting centre in them seems to require a stronger stimulus to set it into action than in ordinary individuals. The appetite returns very quickly. On the sixth or seventh day nearly all the patients have said that "they felt hungry, a sensation which they had not known for a very long time." For the first few weeks of convalescence, within even an hour of having a full meal, a desire for more food is experienced. Whether this is due to an abnormally fast passage of the food from the stomach into the intestine or not is a question of interest. That nutrition is not materially interfered with is proved by the fact that one pound a day is a common gain in weight and this is accompanied by a marked increase of strength.

Newcastle-on-Tyne.

A SERIES OF SIX CASES OF RUPTURED AND PERFORATING GASTRIC ULCER TREATED BY SUTURE, ENDING IN COMPLETE RECOVERY.

By WILLIAM H. BENNETT, F.R.C.S. Eng.,

SURGEON TO ST. GEORGE'S HOSPITAL; MEMBER OF THE COURT OF EXAMINERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND; AND EXAMINER IN SURGERY IN THE UNIVERSITY OF CAMBRIDGE.

I HAVE already recorded in THE LANCET two cases[1] of ruptured gastric ulcer treated by suture both terminating in complete recovery. The first of these was seen in perfect health two and a half years after the operation; in the second the patient was described as perfectly well six months after the treatment but has since been lost sight of. The following four cases complete my experience up to the present date (February, 1898) of the treatment of gastric ulcer by suture. As will be seen all the patients recovered and at present remain well. The number of cases is necessarily small as the circumstances in which the treatment is called for can hardly occur commonly in the practice of one individual; moreover, the period during which the treatment has been in use is comparatively short.

CASE 3. *Perforating gastric ulcer; subphrenic abscess; abdominal section; suture of perforation; recovery.*—A girl, aged sixteen years, was admitted into St. George's Hospital under the care of Dr. Ewart on Oct. 28th, 1896. For eighteen months she had suffered from pain after taking food which was usually relieved by vomiting. Two weeks before admission immediately after the midday meal she was seized with acute pain in the epigastrium which was followed by faintness. She became very ill and remained in bed up to the time of admission. On admission the patient was pale and anxious-looking, the tongue was dry, and the pulse was feeble. The temperature was 103° F. There was acute abdominal pain, the breathing was short and laboured, and the abdomen was distended and rigid over the epigastric region. There was "tympanitic resonance with bell note" over the epigastrium and the lower part of the sternum. The liver dulness was absent. The heart's apex was displaced upwards. Over the left lung below the level of the seventh rib there was absolute dulness with loss of vocal fremitus. On Oct. 29th aspiration of the left chest resulted in the withdrawal of twelve ounces of pus. The abdominal condition remaining the same on the 30th I met Dr. Ewart in consultation and afterwards performed median abdominal section above the umbilicus. Incision of the peritoneum was followed by a rush of stinking brown pus which had been contained in a considerable cavity, the bottom being formed by the stomach wall, in which there was a minute perforation. The perforation was closed by four sutures passed deeply. The cavity was thoroughly sponged out, a drainage-tube being afterwards placed in the depth of the space and brought out through the abdominal wound. Immediate subsidence of the symptoms followed. The temperature fell to normal by Nov. 2nd. At the end of the first week after the operation signs of fluid in the right pleura developed and the patient became worse. Four ounces of bloody fluid were withdrawn by the aspirator. Improvement immediately followed and subsequently was steady and uninterrupted. Some discharge continued from the tube till Dec. 11th, when, after having been previously shortened, it was withdrawn. The patient left the hospital well on Jan. 1st, 1897.

CASE 4. *Ruptured gastric ulcer; general peritonitis; suture; recovery.*—A woman, aged twenty-six years, was admitted into St. George's Hospital on Nov. 7th, 1897. On Nov. 4th the patient had been seized when stooping with sudden acute pain in the epigastrium; she vomited immediately and fainted. She was at once sent to bed and remained so ill that no attempt was made to remove her to the hospital until the 7th. Immediately after the onset of the pain she was seen by an experienced physician who diagnosed ruptured gastric ulcer and recommended her removal to the hospital. For years she had suffered from dyspepsia and occasional vomiting, but there had never been any hæmatemesis. On

[1] THE LANCET, July 7th, 1894, p. 21, and Aug. 1st, 1896, p. 310.

TABLE OF CASES OF GASTRIC ULCER TREATED BY SUTURE.

No. of Case.	Sex, age, constitutional condition, and date of operation.	Time intervening between perforation and operation.	Situation and general condition of perforation or induration.	Peritonitis, local or general.	Operation.	Drainage.	Result.	Time after operation at which patient was last seen or heard of.
1	Female, 41 years; great collapse; April 4th, 1894.	8½ hours.	Posterior aspect of stomach close to pylorus; opening size of No. 6 (English) catheter; surrounding induration equalled size of crown piece.	Limited to upper half of abdomen.	Preliminary "watertight" stitch. Peritoneum afterwards closed over and fixed by Lembert sutures.	No.	Uninterrupted recovery.	Was seen in perfect health 2½ years after operation; free from dyspeptic symptoms.
2	Male, 32 years; severe collapse; April, 1898.	7 hours.	Anterior aspect of stomach about middle; opening (oval) ½ in. long; induration very rigid, 3 in. in diameter.	General.	Omental plug; Lembert's suture.	No.	Uninterrupted recovery.	Seen 10 weeks after operation in good health; heard of 4 months later in good health; afterwards lost sight of.
3	Female, 16 years; septic but otherwise fair; Oct. 30th, 1896.	2 weeks (a subacute case).	Anterior surface; opening minute and circular; extent of induration and peritoneal adhesions prevented more accurate localisation.	Local subphrenic abscess.	Approximation of the peritoneum was impracticable; opening closed by means of deep sutures.	Yes.	Slow recovery; interrupted by pleuritic effusion.	Was well a year after operation and free from dyspeptic symptoms.
4	Female, 26 years; apparently hopeless; Nov. 7th, 1897.	72 hours.	Anterior aspect at extreme cardiac end extending to junction of stomach with œsophagus; opening (oval) ½ in. long; moderate induration only.	General.	Preliminary "watertight" stitches; peritoneum afterwards drawn across and fixed by Lembert sutures.	Yes.	Steady although slow recovery; interrupted by attack of parotitis.	Anæmic, but otherwise perfectly well, February 7th, 1898; no dyspeptic symptoms.
5	Female, 30 years; collapse; Dec. 2nd, 1897.	48 hours.	Anterior surface 2½ in. from cardiac end; circular opening ½ in. in diameter; comparatively little induration.	General.	Preliminary "watertight" stitches; peritoneum afterwards fixed across by Lembert sutures.	Yes.	Uninterrupted recovery.	Perfectly well February 12th, 1898; no dyspeptic symptoms.
6	Female, 25 years; septic but otherwise fair; Jan. 2nd, 1898.	No perforation; acute pain and tenderness for 10 days.	Flat indurated mass involving anterior surface 3 in. from pylorus equal in size to two pennypieces laid side by side.	Local.	Indurated part tucked in and covered by healthy peritoneum fixed across it by Lembert suture.	No.	Rapid recovery, although delayed slightly by attack of parotitis.	Perfectly well at date of publication; no dyspeptic symptoms.

Remarks.—Cases 1 and 2 are reported fully in THE LANCET of July 7th, 1894, and Aug. 1st, 1896. In all the cases median abdominal section above the umbilicus was performed. In Case 2 the abdominal section was commenced below the navel and subsequently extended upwards. General abdominal flushing was used in Case 2 only. The shortest period during which either of the patients remained in hospital was forty days, the longest period being eighty days.

admission there was extreme collapse. The skin was cold and sweating, the pulse was very quick and small. Her condition was apparently hopeless. There was acute general abdominal pain, the abdomen was distended, and peritonitis was general. Median abdominal section above the umbilicus was performed at once (seventy-two hours after perforation). A large quantity of fluid containing stomach contents immediately came away upon opening the peritoneum. There was general matting of the intestines. A gaping oval perforation of the stomach an inch in length was found at the cardiac end on the anterior aspect. The cardiac extremity of the perforation reached the point of junction of the gullet with the stomach. The suturing of this opening appeared at first sight almost impossible in consequence of the depth of the parts, which could not be drawn up to the wound. Its closure was finally effected by the use of long rectangular cleft palate needles, a pad of matted tissue being fixed over afterwards to afford additional support. All accessible lymph was gently sponged away and a drainage-tube used, but abdominal flushing was not employed. The patient rallied in a remarkable way and made a steady, although slow, recovery, which was interrupted for a short time by an attack of parotitis.

CASE 5. *Ruptured gastric ulcer; general peritonitis; suture; recovery.*—A woman, aged thirty years, was admitted into St. George's Hospital on Dec. 2nd, 1897. On Nov. 30th in consequence of constipation she had taken a dose of castor oil and immediately upon the straining caused by its action she felt acute pain in the epigastrium, became faint, and vomited. She at once became very ill and as soon as seemed safe she was brought to the hospital. For years she had suffered from chronic dyspepsia and for three years she had noticed a tender spot under the ribs on the left side. When nineteen years old she on one occasion vomited blood. On admission the patient was drowsy. The pulse was 132 and weak and the temperature was 102° F. There was nausea but no vomiting. There was acute epigastric pain. The abdominal tenderness was general and acute, the liver dulness was wanting, and the symptoms of general peritonitis were typical. On percussion there was a high-toned "bell" note as far down as two inches below the navel. Median abdominal section above the umbilicus was performed as soon as possible (forty-eight hours after perforation). A large rush of fluid containing stomach contents followed upon opening the peritoneum. The stomach was distended and there was much intestinal matting. A circular perforation half an inch in diameter was found two and a half inches from the cardiac end on the anterior surface of the stomach. The induration around was less than usual. The opening was closed by suture, all accessible lymph was sponged away, and a drain was placed in the abdominal wound, but no flushing of the abdominal cavity was used. Recovery was rapid, but was interrupted for a few days by the development of signs of pleurisy on the left side. As a precautionary measure an exploring syringe was used but no fluid was withdrawn. The patient left the hospital on January 10th, 1898, looking singularly well and eating ordinary food without symptoms of dyspepsia, which she had not done for a very long time before.

CASE 6. *Perforating (unruptured) gastric ulcer; local peritonitis; operation; involution of indurated area; Lembert's suture; recovery.*—A woman, aged twenty-five years, was admitted into St. George's Hospital on Dec. 27th, 1897, under the care of Dr. Rolleston. For six months the patient had suffered constantly from distressing indigestion with obstinate constipation. She had never vomited. For six or seven months she had suffered from fixed pain and tenderness on the right side of the abdomen immediately below the ninth rib, these symptoms being greatly increased by flatulence. On Dec. 23rd, 1897 the pain became very acute and the tenderness was so great that the least touch "caused her to flinch." Almost immediately the abdomen

became greatly distended with flatulence and she became too ill to get about. On admission the patient was anæmic but well nourished. She seemed very ill. The temperature was 101·2° F., and the pulse was quick and small. The abdomen was distended, the general intestinal resonance being much increased. The liver dulness was normal. The movement in the epigastric area of the abdominal wall was *nil*; below the navel the movement was hesitating but otherwise natural. There was an acutely tender spot in the situation already referred to. Acute pain was complained of in the left pelvic region, over which was also tenderness. Vaginal examination, beyond showing general hypæsthesia, was negative in result. Taking the pelvic symptoms into account it was thought prudent to watch the case for a day or two before resorting to operative treatment. After a free evacuation from the bowels considerable improvement for a time followed, but on Jan. 2nd, 1898, the whole of the symptoms recurred with exaggeration. Median abdominal section above the umbilicus was therefore performed. Upon opening the peritoneum a hard flat mass the size and shape of two penny pieces placed side by side was exposed. This mass, which at first sight was suggestive of malignant disease, burst during manipulation, about an ounce of thin peritoneal fluid escaping. Upon opening out this cavity its base was found to be formed by the stomach wall greatly indurated. In the centre of the indurated area were two soft spots the surfaces of which were still intact and apparently not very thin. From the appearances it was quite certain that there had at no time been any actual breach of surface. The lymph, &c., about the affected area of the stomach having been cleaned away with ponges the indurated part was tucked in and the healthy peritoneum from the stomach around was sutured across it by eight Lembert's sutures. The abdominal wound was united with fish-gut sutures in the usual way; no drain was used and abdominal flushing was not employed. Immediate and complete relief of all the symptoms followed, the temperature dropped to normal at once, and the pain disappeared. Some troublesome vomiting occurred on Dec. 30th and 31st but ceased on the removal of the stitches used for the abdominal wound. On Jan. 12th, 1898, right parotitis caused some interruption of the convalescence, but the patient left the hospital in good health on Feb. 5th.

In the main the cases now recorded speak sufficiently for themselves. The last is in some respects the most interesting, as it shows the good which may come from the radical treatment prior to actual perforation. The recovery in the second case (No. 4 in table), in which perforation clearly occurred seventy-two hours before operation and in which there was general peritonitis, may be regarded as extraordinary. At the time of operating I had little if any hope of a successful issue and had not the patient begged so hardly for relief from the acute pain from which she suffered it is doubtful whether I should have thought interference justifiable, as her condition seemed so desperate. I am not quite clear whether the suturing in the first case (No. 3 in table) really contributed to the patient's recovery to any great extent, as similar subphrenic abscesses undoubtedly connected with gastric ulcer may recover equally well with simple drainage, the perforation being neither seen nor sought for. I have, however, little doubt that the patient owes her ultimate recovery to the early detection and removal of the pleural effusion which supervened a week after the operation. My whole experience of the treatment of gastric ulcer by suture is epitomised in the accompanying table.

The operation attempted in all the cases tabulated consists in first rendering the opening in the stomach watertight by bringing the edges together by means of a suture or sutures transfixing the whole thickness of the stomach walls in order to prevent the leakage which is otherwise liable to interfere somewhat with the later stage of the operation, which consists in covering in the opening and surrounding induration by peritoneum folded over from the neighbouring healthy parts and fixed in position by the necessary number of Lembert's sutures. In the third case in the table it was found impossible to fold the peritoneum over; the operation in that instance therefore was not carried beyond the first stage. In the second case the rigidity of the induration prevented the initial closure of the opening by suture; it was therefore plugged with a piece of omentum. In the remaining cases no insuperable difficulty in the first stage of the operation was encountered.

Cases of perforating gastric ulcer with subphrenic abscess in which the suturing of the perforation is impracticable either from local conditions or by reason of the general state of the patient belong to a different category from those now described. The first recovery after operation deliberately performed for this condition recorded, I believe, in this country occurred in a case under the care of Dr. Ewart and myself, which was published by us in THE LANCET of Nov. 17th, 1894. My subsequent experience in this class of case I hope to record somewhat later.

Chesterfield street, W.

A SUB-OCCIPITAL LOBE IN THE BRAIN.

BY WALLACE WOOD, M.D.

DURING the past year I have taken up the study of the animal cerebrum, following along the lines of my master, Broca, and preparing the specimens by his process of dry sculpture. This process has many advantages, not the least of which is that carnivorous, herbivorous and primate brains may all be produced of the same size. By this method I have prepared the brains of forty-two bovines, a first series of thirty and a second series of twelve, including cows, bulls, steers, heifers, calves and draught and stalled oxen, with a view of tracing the homologies, if any, bovine and human, of the cerebral cortical gyri.

One of the most striking differences between the brain of bos taurus and homo when reduced to the same size and placed side by side is the apparent absence in the former of an occipital lobe. That remarkable bulb-like formation upon the dorsal surface marked upon the primate O^1, O^2, O^3 seems in the bovine to present no prominence. On the other hand,

FIG. 1.

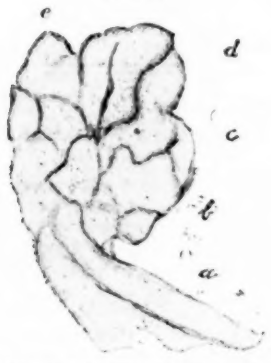
Sub-occipital lobe of right hemisphere of brain of bovine male. *a*, The posterior extremity of the hippocampus. *b*, *c*, *d*, The three parts of the fusiformis. *e*, The ligula. The ligula is highly developed and accentuated, the crest or fusiformis ramping upon it in a powerful curve.

however, one finds upon the bovine brain a swelling eminence under the occiput—that is, upon the cerebellar surface, forming as it were a lobe clear-cut and distinct by itself. This lobus consists of two lobules more or less united but separated from all else by well-marked fissures. Closer inspection shows that one of these lobules lies at the posterior extremity of the hippocampus and is the homologue of the ligula or gyrus temporo-occipitalis medialis in man, while by dissecting with a little care the other is with equal clearness demonstrated as the homologue of the fusiformis or lobulus temporo-occipitalis lateralis in man.

The demonstration of these homologies in this somewhat neglected region of the cortex would perhaps be of little moment were it not that by accumulated examples of this

lobe in bovines of the various artificially created and specialised classes these lobules are found to present certain variations which throw out strong suggestions as to function. In the male animal this lobus sub-occipitalis appears somewhat broadened and squared; the gyri are ample, compli-

FIG. 2.



Sub-occipital lobe of right hemisphere of working ox. The ligula is shrunken to the form of a simple conicle. The fusiformis is of simple trefoil shape.

cated, and swelling; the ligula is sharp, strong, and staminal in appearance; and the fusiformis is of ridge-shape or crested.

In the draught ox the lobe offers a distinct contrast, the posterior extremity being usually rounded or pointed, no longer presenting the squared, expanded, or widened appearance. The lobe is flaccid and anæmic, the ligula is much smaller—reduced to a mere outline, more widely separated from the fusiformis, which now also is smaller and no longer swollen or ridged.

The terms "ligula" and "fusiformis" seem well to define the forms of these lobules in steers and oxen, but do not well apply to those lobules in the brain of the mature male.

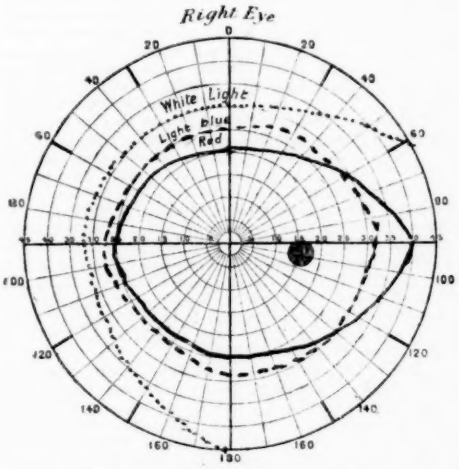
A CASE OF AGORAPHOBIA, WITH REMARKS UPON OBSESSIONS.

BY ROBERT JONES, M.D., B.S. LOND., F.R.C.S. ENG.,
MEDICAL SUPERINTENDENT OF THE LONDON COUNTY ASYLUM, CLAYBURY.

A SINGLE man, aged thirty-nine years, 5 ft. 4½ in. in height, 8 st. 7 lb. in weight, and slightly built, was transferred to Claybury Asylum three years ago from another asylum where he had been admitted a patient about five years previously upon the following medical certificate: "He is the subject of a morbid dread and fear of something in the way of an accident happening to him and that he cannot move about without seeking protection or assistance from someone. He is very excitable and particularly anxious in asserting that it is only since an accident that his nervous system has been disorganised. He was brought here [workhouse infirmary] by the police, having given himself up at the police station because he fancied people were searching for him." The patient's family history revealed that his paternal grandfather was in Bethlem Asylum, that his father was eccentric and parted from his wife, that his maternal uncle was in an asylum, and that his sister suffered from headaches and was peculiar. As to his own previous history, he was always nervous and disliked being alone; he was also somewhat overworked at a business house in the city, where he met with a slight accident by falling from a ladder and striking his head on a counter, receiving some concussion in consequence. He states that he was able to attend to business after that, but felt a dread of walking out of doors, and for some time travelled backwards and forwards by omnibus to avoid crossing streets and passing open places. He states that this uncomfortable sensation grew upon him so that it became a terror to him, and he decided to go to America, thinking that he might thus be freed from it. In crossing the sea he never felt anxiety—owing, probably, to the proximity of lateral objects, which gave him security; but it was as bad as ever when he landed and he decided to return, shortly after which he was placed in an asylum, where he remained about five years. He was then discharged, but in three months returned, and he has remained under treatment ever since, about three years. There was no history of syphilis or drink. The patient's present condition is that of a nervous, restless, and fidgety individual, somewhat anxious and impulsive, inclined to slight outbursts of misdirected energy, and he is the very opposite of "calm." He belongs to the psychopathic or neurasthenic type with a marked history, as above related, of a transmitted taint. His locks at times are wild and wandering and his brown eyes are rather prominent. His pupils are dilated but react to light and accommodation. His head, with a bald top, accords with those unexpected measurements often found in the insane, being full and well shaped. The circumference is 53 cm. (21½ in.), the greatest length with tape is 35 5 cm. (14 in.), and the width from ear to ear over the crown is 30·5 cm. (12 in.). With callipers the antero-posterior diameter is 19 cm. and the bi-parietal 15·5 cm. His vision upon examination by my colleague, Dr. F. P. Piper, was found to be myopic, glasses of −4 5 D. bringing the vision of both eyes to $\frac{6}{6}$, but they do not relieve his mental symptoms. There is no astigmatism and the discs present nothing more than slight myopic crescents. There are no vitreous opacities or other retinal changes. Figs. 1 and 2 show his range of vision, as measured by Bischhausen's perimeter, for white light, blue, and red—an almost normal field for each eye. His hearing is preternaturally acute. He could hear Galton's whistle with the plug at 2 mm. at a distance of 6 ft. and he could hear the tick of a watch at almost twice the distance. There was no tympanic abnormality and his throat was normal. His gustatory and olfactory senses seemed to be, if anything, more sensitive than normal, but he has distinct hallucinations of common sensation, believing that he has a needle in his skull which got there after "swallowing the wrong medicine." He talks ramblingly about the "pulsating veins" of his body, &c. His heart is a "nervous" one, but his lungs and kidneys appeared to be normal and an analysis of the urine in Dr. Mott's laboratory was as follows: quantity in twenty-four hours 1200 c.c., acid, specific gravity 1012; total sulphates calculated as SO_3 0·1328 per cent. or 1·5936 grammes in 1200 c.c.; aromatic sulphates calculated as SO_3 0·0151 per cent., or 0·1812 grammes in 1200 c.c. (the ratio of aromatic sulphates to total sulphates is 1 to 8¾); total phosphates calculated as P_2O_5 0·069 per cent., or 0·828 grammes in 1200 c.c.; nitrogenous substances calculated as N 0·940 per cent., calculated as NH_3 0·051 per cent., and calculated as proteid matter 5·6588 per cent.; urea 1·5 per cent., or 18 grammes in 1200 c.c.; total solids (solids remaining when urine is dried at 100° C.) 28·56 grammes in 1200 c.c.; and chlorides calculated as NaCl 0·7 per cent., or 8·4 grammes in 1200 c.c. The patient was occupied by his own request at some clerical work and generally evinced a disinclination to out-door exercise; one day, however, he made one of a party of three for a picnic into Epping Forest. He did not say much about his sensations until it was arranged for this picnic to be repeated, when he described his feelings at length and begged to be excused going further than an avenue of elms leading to Theydon Bois, which he described as "beautiful, for the trees on either side prevented my seeing the open fields and large views beyond." He said that he had always had a dislike to be in "wide places" and that all his life he had avoided them. He states that he has no giddiness on these occasions, although after the concussion referred to he says he saw "St. Paul's [which he was near] turning round and round." He described his feelings at the summer picnic in the open park (where the patients assemble) as those of "acute suffering the whole time." When in the middle of the park he was, he states, overcome with a feeling of intense misery and as if he would have fallen down, although he experienced no headache, giddiness, or dizziness. This feeling, he states, disappears as he gets "near the trees or where there were plenty of people." His feeling is further described as if he should "fall down dead" unless he could

lay hold of something. It is not the mental dread of the open place or the actual fear of the result of falling that seems to seize him, but the "miserable suffering it produces." He says he has never been able to stand on any open or high place owing to this feeling of "suffering"—not because it brings on giddiness. To stand alone on the edge

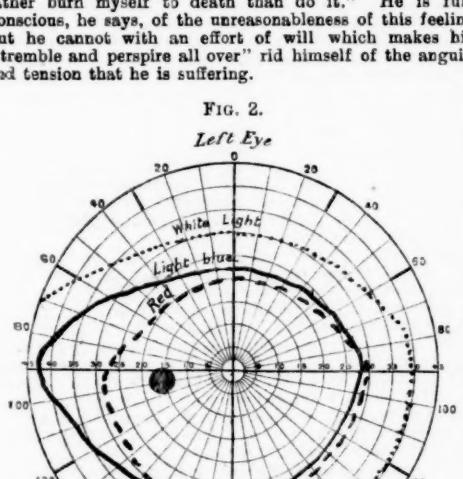
FIG. 1.



Range of vision for red, blue, and white light for right eye, taken from within, out in the dark.

of a precipice or in the middle of a large plain would give him such agony (using his own words) that "I would rather burn myself to death than do it." He is fully conscious, he says, of the unreasonableness of this feeling, but he cannot with an effort of will which makes him "tremble and perspire all over" rid himself of the anguish and tension that he is suffering.

FIG. 2.



Range of vision for red, blue, and white light for left eye, taken from within, out in the dark.

There seems to be a periodicity about this condition and it may (as Nieden has endeavoured to show in similar cases) be epileptic in character as he occasionally wets the bed. Nieden described paroxysms of this sensation as being accompanied with considerable concentric narrowing of the field of vision both for white and colours. This he found to be bilateral and his interpretation suggested that it may have been of cortical origin and caused by vaso-motor spasm of the arteries supplying the visual area of the cuneus. He seems to be supported in the vascular view by the fact that in bilateral (double) hemianopia from disease (? spasm) of the vessels a very small central field of vision is often left, due probably to the half vision centres just perceiving visual impressions. In some cases due to temporary spasm of the vessels and not to permanent destruction of the visual cortex this central remaining part of the field of vision is stated to be correspondingly brighter, although usually there is much diminished acuity. In this case there is no hemianopia and there is comparative symmetry between right and left vision for white light, blue, and red.

Sir Thomas Grainger Stewart, writing to me on Nov. 11th, 1897, stated that he referred to this condition ten or twelve years ago in relation to giddiness and he then regarded agoraphobia as "co-related with cliff or tower giddiness, the patient having somehow learnt to depend for his special equilibration upon visual impressions of lateral objects and the absence of such impressions produces the symptoms." Vision certainly is the most important of the localising senses; our idea of the posture or attitude of our body generally takes the form of a mental picture.

Westphal in 1872 was the first to describe this condition and he characterised it as a neurosis allied to epileptic vertigo. Cordes, Legrand du Saulles,[1] Ritti, M. le Gros,[2] and others have described cases.[3] Maudsley referred to certain so-called "sensitives"—persons easily and deeply affected by impulses so slight as to be out of proportion to the effect produced—who were overcome by a morbid dread. One patient whose case was described by Reichenbach "could not look at an open plain because it made her sick"; another "avoided an open square and preferred to go through the alleys rather than cross it." Sir James Crichton Browne, in his address on "Dreamy Mental States," described the overpowering influence which laid Arthur Hugh Clough prostrate after looking over the brow of a beetling cliff at the open sea below and a similar dread is stated to have possessed John Addington Symonds.

Hack Tuke described the case of a lad, nineteen years of age, "a law student who had gained distinction at school and matriculated at the London University, and who met in the course of his reading with the expression—*It was not compatible*. Soon after he came across the German words—*Ich liebe es nicht*. Now it struck him that the negative in the former sentence preceded, and in the latter succeeded, the most important word. The man began to puzzle himself about negatives in general. Whatever he read raised the question in his mind as to the construction of sentences in which a negative occurred. It became an all-important, all-absorbing problem to him and interfered with his reading and working. The burden of his life was to place the negative in the right order—whatever that might be." The frequent occurrence of a line of poetry or a tune is a familiar instance of the domination over the will of simple words, phrases, or tones. These tyrannies of imperative ideas are called besetments, impellent notions, or obsessions—and obsessions bear the same relation to ideas that impulses do to acts. Obsessions are of many forms and may be considered as falling under (*a*) intellectual, (*b*) sensory, or (*c*) motor varieties. The (*a*) intellectual include those already quoted, hypnotic suggestions artificially induced, the spontaneous imperious suggestions of the insane, and the quasi-insane conditions of somnambulism; the (*b*) sensory include an extensive variety according to the sense affected or the combination of various senses by association of ideas—the *associative supplementing* of ideas; whilst the (*c*) motor include gestures, grimaces, tricks of posing, carriage, &c., a familiar one being Dr. Johnson's habit of touching the same object in passing during an occasional walk. Many of these are well known among the inmates of lunatic asylums. These impellent ideas may become a positive torment, growing into persistent fearful ideas and becoming intolerable. There is an absolute inability of the will to inhibit them and they escape all attempts at volitional control.

These cases of imperative ideas are often consistent with sanity in so far as this concerns testamentary capacity and responsibility, but they border closely upon those forms of

[1] Peur des Espaces, Gazette des Hopitaux, 1877-78.
[2] Annales Médico-Psychologiques, 1885.
[3] Ibid., 1878; Archiv für Psychiatrie, Band vii.

insanity described as abulic (ἀ, βουλή—will) in which violence and vehemence are more often due to loss than to increase of will-power, and in which there occurs as a clinical symptom a distinct loss of control of the higher inhibitory centres over thought and action. Moreover, there is an etiology common to the insane and the victims of these fears; in both there is a taint, both are among the neurotics, their relatives are the neurasthenic and the degenerate, although there may be of their kindred some who are noted for high literary and intellectual attainments. As to the pathology of impellent ideas the presumption that irregular stimulation of isolated cortical centres should cause motor instability on the one hand and vertiginous feelings, disturbed sensations, and emotions—corresponding to the subjective aspect—on the other, would seem to be as favourable a hypothesis as can be advanced according to our present knowledge.

Claybury.

URTICARIA AND ACUTE CIRCUMSCRIBED CUTANEOUS ŒDEMA.

BY H. OPPENHEIMER, M.D. HEIDELB., M.R.C.P. LOND.

THE intimate relation existing between urticaria and that peculiar angio-neurosis known as "acute circumscribed cutaneous œdema" has been a matter of conjecture ever since Quincke first described the latter disease. It has been frequently observed that the same causes which in some individuals call forth a nettle-rash produce in others a peculiar flying œdema which, like the former, is frequently attended with gastro-intestinal disturbance. The connexion between these conditions can be easily understood if it be remembered that the pomphi of urticaria are themselves characterised by local œdematous exudations due to vaso-motor influence; but in so far as I know, no cases are on record where both conditions co-existed at the same time in the same individual. Yet I do not think they can be very rare, as in less than three months I had four cases under my care where both urticaria and acute cutaneous œdema were present in a well-marked form—unless, indeed, chance has played me that trick which has so frequently been a matter of surprise and has been honoured with the title, "the law of multiplicity of cases." Indeed, I am convinced that both disturbances are absolutely identical, varying only in their manifestations and in the external appearances with the intensity of the process, with the part of the body involved, and with the depth to which the skin is affected. And as I think that the following cases offer some peculiarities in other respects I consider it worth while to publish them.

CASE 1.—A man, aged twenty-five years, came to me on Nov. 20th, 1897, suffering from gonorrhœa. He had been taking sandal-wood oil for the last three days. On getting up on the morning of the 20th he felt an unbearable irritation of the skin, and on inspection he discovered large, well-marked pomphi on the chest, abdomen, and thighs, while the prepuce was enormously swollen. When I saw him in the middle of the day the eruption had spread to the back and arms, the tongue was furred, and I learned that the bowels had not acted for the last two days. I ordered him to discontinue the sandal-wood oil capsules, to take frequent tepid baths, and I gave him a mixture containing bicarbonate of sodium and carbonate of magnesium. In the evening he called again; the rash had reached the face and the eyelids were greatly swollen. I prescribed lead lotion for the eyelids and penis, and the next day the eruption had somewhat subsided. He made a gradual recovery which was complete in about a week.

CASE 2.—This patient was a man, aged thirty-two years, who had been previously under my care for chronic dyspepsia. He came to me on Jan. 4th, 1898. He had had for luncheon on the previous day venison which was rather "high." In the night he awoke with violent itching and noticed some red spots on his abdomen and thighs, while the upper eyelids were very much swollen. The treatment prescribed was as follows: tepid baths, a full dose of Carlsbad salts, and bicarbonate of potassium in peppermint water. On the 5th the upper eyelids were free but the lower ones were much swollen; the lips were enlarged to about four times their normal size and the hands were greatly swollen and showed livid discolouration. There were plenty of confluent wheals on the back, buttocks, the extensor surface of the arms and the posterior surface of the legs; a very few isolated ones were on the chest, abdomen, and flexor surface of the arms and anterior surface of the legs. There was no rash on the face. Lead lotion was prescribed. On the 6th the eyelids were better. There was a plentiful eruption on the face and scanty spots were present on the scalp. The prepuce was very œdematous. On the limbs the order of things was reversed, those parts which previously were comparatively free being much affected and *vice versâ*. Salicylate of sodium was given internally while lead lotion was applied to the penis and ichthyol ointment to the hands. On the 7th the eruption was even more plentiful than on the day previous. There were enormous masses of wheals on the chest and abdomen. The face was better. The swelling of the hands and prepuce had almost disappeared, but the feet were so much swollen that the patient was unable to put on his slippers. Three grains of calomel and full doses of hydrochloric acid were given. On the 10th the skin was perfectly free, but there was marked dermography. On the 13th the patient had a relapse after partaking freely of roast goose. The eyelids, lips, and feet were very œdematous. There was a free urticaria eruption on the chest and abdomen. On the 17th the skin was normal. There was no dermography.

CASE 3.—A man, aged twenty-three years, came to me on Jan. 17th, 1898. He suffered from cystitis and had been on an exclusive milk diet for the last three days and had taken salicylate of sodium on the 16th. He awoke next morning with some pains in the wrist and ankles which were very much swollen and livid. The patient thought that he had acute rheumatism. For the last few hours he had felt very troublesome itching and on inspection I discovered a well-marked nettle-rash which the patient had not noticed before. The bowels were freely open and the tongue was covered with a thick milk fur. I ordered him to stop the salicylate mixture, to take tepid baths, and prescribed lead lotion for external use and internally hydrochloric acid in full doses. On the 18th the rash was fading away; there were no new eruptions. The ankles and wrists had decreased in size but the prepuce was very much swollen. On the 26th the skin had been normal for the last three days; the patient resumed the salicylate of sodium, and on the very next day the rash reappeared even more plentifully than before. The trunk and limbs were almost completely covered with urticaria; there were isolated pomphi on the face and scalp. The eyelids, lips, and prepuce showed œdematous infiltration. The previous treatment was resumed. On Feb. 1st the skin was perfectly normal and no more salicylate having been taken it has remained so.

CASE 4.—The patient was a woman, aged twenty-eight years, whom I saw on Jan. 21st, 1898. She had been previously healthy except for habitual constipation. On the 19th she had partaken of mussels and she awoke next night with a fearful irritation of the skin, and on getting up in the morning discovered that her whole body except the face was covered with an eruption which proved to be urticaria and that the eyelids, hands, and feet were very much swollen. The bowels had not acted for the last three days; the tongue was clean. The eyelids were very pale and the hands and feet were dark livid. Warm baths, lead lotion for the eyelids, and ichthyol ointment for the hands and feet were prescribed and internally Carlsbad salts and hydrochloric acid. On the 23rd the bowels had not yet acted. The rash had somewhat decreased but had spread to the face and scalp. The eyelids and hands were free but the feet were still swollen and livid. The nymphæ were œdematous and transformed into bags of the size of a hen's egg. The front and sides of the neck were blown up with serous transudation, so that the neck had the appearance of being surrounded by a thick collar. Calomel (two doses of three grains each) and hydrochloric acid continued in increased doses were prescribed. On the 24th there was less irritation. The rash was still visible. The swellings were diminishing in size. One dose of calomel (two grains) was prescribed. On the 27th the nettle-rash disappeared but the neck and feet were still somewhat enlarged. On Feb. 3rd the skin was perfectly normal.

Adamson-road, N.W.

A CASE OF SPONTANEOUS RUPTURE OF THE UTERUS DURING THE FIRST STAGE OF LABOUR.

BY HENRY W. J. COOK, M.B., B.S. DURH.

AT 5 A.M. on Nov. 28th, 1897, I was sent for to attend a woman, aged thirty-three years, in her fourth confinement. Her previous confinements had all been rapid and normal, all the children except one being alive and healthy. She was curetted for endometritis twelve months before the present occasion and became pregnant soon after the operation. I had casually seen the patient several times during her pregnancy, which advanced in a perfectly normal manner, the only point worthy of notice being that she was of a very highly neurotic temperament. On examining the abdomen as far as I could make out the presentation was normal; there was no unusual distension, the child's movements could be plainly felt, and I heard the fœtal heart sounds below and slightly to the left of the umbilicus. Per vaginam I found a capacious, roomy pelvis; the os was dilated only to about the size of a shilling, the head presenting normally, and the membranes unruptured. The pains, which had only lasted a couple of hours, were moderately strong and regular. As the case was evidently in an early stage I left the patient, returning about 7.30 A.M., when I found that the pains had become much more severe and the os had now dilated to the size of a half-crown, the head being engaged in the pelvic brim. I remained with her, intending shortly to rupture the membranes, and to allow her to sit about the room a little. About twenty minutes after, during a severe pain, she suddenly became very faint and pallid, so much so that she almost dropped on the floor, where I let her lie for a few minutes. According to her own statement the pain was so severe as to make her feel faint. Her pulse, previously normal, was rapid and soft, beating at about 120 to the minute; she vomited some milk and water which she had taken shortly before. I administered a hypodermic injection of brandy, after which she stood up and with the assistance of the nurse and myself got on the bed, complaining then only of slight pain in the abdomen. Her petticoat was wet with fluid and there was some blood coming from the vagina, though not in great quantity; the fluid was evidently liquor amnii. I immediately proceeded to examine her per vaginam and found at once that something unusual had taken place. The head had completely vanished; indeed, from the interior I could feel absolutely no part of the child; where the os and cervix should have been I could feel a raw ragged surface which at first felt to me exactly like placental tissue and I thought at first that I must have in some unaccountable way in my first two examinations missed a diagnosis of placenta prævia, especially as she was now losing some blood. I then turned my attention to the abdomen and at first sight saw that I had a case of ruptured uterus with the child floating free in the abdominal cavity. The abdomen was irregularly elongated transversely and in the right umbilical and lumbar regions I could plainly feel a foot through the abdominal wall and on the opposite side was an eminence which I made out to be a shoulder. On feeling again per vaginam (inserting my hand) I could now clearly distinguish the state of affairs; there was an extensive rent extending upwards from the upper extremity of the vagina up the posterior wall of the uterus reaching almost to the fundus; what I at first had taken to be placenta was the edge of the rent and the posterior surface of the posterior wall of the uterus which had evidently become somewhat inverted; through the rent I could feel the intestines but no part of the child or of the placenta. The examination caused the patient great pain and I could go no further without an anæsthetic. Being alone, with the exception of an untrained woman as nurse, I deemed it advisable to wait till I could get more assistance. The patient was almost pulseless and I preferred to wait and keep her going with stimulants rather than have her die under an anæsthetic without anyone else to help. I therefore sent a messenger on horseback to my nearest medical neighbour, Mr. W. H. Brown, of Colac, twelve miles distant. He arrived in two and a half hours and in the meantime I had rallied the patient and just succeeded in keeping her alive with brandy injected hypodermically and per rectum, salt, solution injection, &c. Ether was now administered and the hand was inserted into the vagina through the rent posteriorly (the uterus was partially contracted) and into the abdominal cavity. After some trouble a foot was seized and drawn through into the uterus, the rest of the child following easily, with the exception of the head which somehow caught in the tear; after considerable difficulty it was pulled through and then delivered with ease, there being a large, well-developed pelvis with absolutely no obstruction. There was slight prolapse of intestine which was returned easily. The child was dead. On tying the cord and dividing it the next thing was to find the placenta. This turned out a rather difficult matter, but after some search and by dint of following up the cord to its insertion it was found high up, almost under the liver. The uterus and vagina were douched out with solution of iodide of mercury, two hypodermic injections of ergotine were administered into the buttock, and the uterus, including the rent, was firmly packed with iodoform gauze. We had to finish hurriedly, for the patient being all but dead we turned our attention to rallying her. She improved so far as to be able to talk to her friends with the help of such means as raising the lower end of the bed, stimulants, salt-solution, compression of the abdominal aorta, &c. In the end, however, our efforts were unavailing, for she died six hours after the accident from pure shock. A post-mortem examination was not made.

I have deemed this case worthy of publication owing to its rarity and to the absence of any apparent cause. This lesion, at any time uncommon, generally occurs only in the lower segment of the uterus, and I believe tears beyond the cervix are mostly transverse. In the present case, however, it was almost longitudinal, and reached without a doubt nearly to the fundus. As regards the cause this, as I have stated, was quite unapparent. As far as we could ascertain there was no growth in the uterus nor were there any sharp processes of bone growing from the pelvis likely to cause laceration; the pelvis being large and roomy I fully expected a rapid delivery, and no ergot or other means had been used to produce excessive uterine contraction. The only way to account for the accident was the fact that the patient had suffered from endometritis and the uterine wall must have been affected as a result. The symptoms were well marked and unmistakeable almost immediately after the occurrence.

Regarding the treatment, the woman was so much collapsed that abdominal section was out of the question; she would certainly have died in the middle of it; besides, her surroundings were very unfavourable for such an operation. We were fortunately able to deliver her, though with much difficulty, *per vias naturales*.

Birregurra, Victoria.

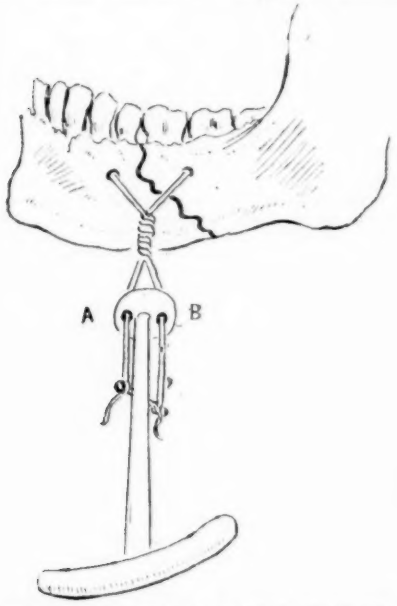
FRACTURE OF THE INFERIOR MAXILLA TREATED BY A MODIFIED METHOD OF WIRE SUTURE.

BY T. S. CARTER, L.D.S R.C.S. ENG.,
HONORARY DENTAL SURGEON TO THE GENERAL INFIRMARY, LEEDS.

ON Dec. 29th, 1896, I was asked to see a patient, aged nineteen years, in No. 3 ward of the Leeds General Infirmary. He was a canal boatman and during the early morning of the 28th was winding a lock windlass when his foot slipped on a piece of ice and the revolving arm struck him across the jaw, causing a double fracture of the inferior maxilla and more or less concussion of the brain. On examination I found the jaw fractured through its body between the second bicuspid and first molar teeth on the left side and between the first and second bicuspids on the right side. The anterior portion was much depressed, and although there was no external wound there was considerable swelling and the patient was in an irritable condition. On the 30th he was anæsthetised and I adopted the method of wire suture which I described in THE LANCET of Dec. 3rd, 1892. In this case, however, I brought into use an instrument I have devised for metallic suturing. It is applicable in this or any other situation where osseous suture is required, and I found it answer so admirably that I feel justified in placing before the readers of THE LANCET a somewhat detailed description

of its form and method of application. The accompanying illustration shows the design of the "suture key."

In tightening sutures with pliers it is necessary to release the hold of the wires with every turn given by the hand. This is very awkward in maxillary cases when the fracture is posterior to the angle of the mouth. If however two wires are passed through the holes marked A and B they may be tightened to any extent without being released from the grasp of the key. In this particular case I drilled (with a bayonet-shaped drill fixed in a dental engine) a hole through the body of the jaw between the first and second molars on the left side. Having passed a stout silver wire I drilled another hole between the first and second bicuspids and so returned the wire. Having repeated this on the right side I raised the depressed mental portion of the maxilla into position and used the "key" as depicted. Before turning



The figure shows the key for tightening the wire after it has been passed through the bone. The free ends are passed through the holes A and B, twisted round the projections on the key, which is then turned round and round by the cross-handle.

down the twisted sutures I coat them with very soft guttapercha, to act as pads and prevent chafing of the lip. It makes the silver wire softer and less liable to break if annealed in a spirit flame before use. It is well to supplement the sutures by applying a four-tailed bandage, and where there are many teeth and much displacement by a Hammond's splint. On March 15th, 1897, I tightened the sutures and on May 1st I removed them. Before doing so, however, I observed a sequestrum hanging like a threaded bead on the wire on the inside of the mouth. The hole through the centre was made by the drill and the necrosis was most probably due to heat produced by the speed of the revolving engine point. It is therefore well to observe caution in this respect and also not to advance the drill too rapidly through the bone tissue. The fractured portions of the jaw were perfectly united and there was complete antagonism between the upper and lower dentures. I do not think it is possible to bring about such a complete restoration and retention of greatly displaced portions of maxillæ in their normal positions by the methods usually adopted. Now, however, that the dental engine renders the drilling portion of the operation such a simple matter there is, I think, much to be urged in favour of this quick and effective method of dealing with what used to be considered tedious and somewhat unsatisfactory cases. The small instrument I have ventured to bring before the notice of the readers of THE LANCET will be made to my pattern by Messrs. Maw, Son, and Thompson, Leeds.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

KING'S COLLEGE HOSPITAL.

TWO CASES OF NEPHRORRHAPHY.

(Under the care of Mr. BOYCE BARROW.)

MUCH variety of opinion exists as to the best method of treating moveable kidney. For the minor cases in which the symptoms are not severe or continuous a belt is frequently all that is required; as to this all surgeons are agreed; but the more severe cases need different treatment, for in most of them belts have little effect in controlling the movements of the kidney, and if it be acknowledged that in some cases at least belts are useless then nothing can be done but to suture the kidney. It appears to be necessary that the stitches should penetrate the kidney substance and not be inserted merely into the capsule of the organ. As to the results obtained the general opinion is that the proportion of failures after nephrorrhaphy is small. Albarran [1] says that of 374 cases in which the operation was performed 78 per cent. were completely relieved. Relapses certainly do occur and, as in one of the cases recorded below, a refixing of the organ may be successfully performed. For the notes of these two cases we are indebted to Mr. J. H. Walker, house surgeon.

CASE 1.—A married woman, aged thirty-eight years, was admitted into King's College Hospital on Oct. 21st, 1897, complaining of pain in the back and right shoulder and of a moveable swelling in the abdomen. In January, 1897, she suffered from pain between the shoulders extending down the back and also from pain, "bearing down" in character, in the abdomen. She was under the treatment of a medical man for about three months and then the moveable abdominal swelling being noticed she was advised to have an operation performed. For this purpose she was admitted into St. George's Hospital and was operated on in August, 1897, for the moveable kidney. She was discharged cured on Sept. 20th and for about a fortnight she remained well, but after that the symptoms began to return and were soon as bad as ever. On admission to King's College Hospital her general health appeared to be good. She had never had any severe illness or accident and in her family history there was nothing noteworthy. In the right loin was seen a vertical scar three and a half inches long parallel to the outer edge of the quadratus lumborum muscle. On palpation the right kidney could not be felt, but deep palpation caused a good deal of pain. On the right side of the abdomen towards the loin a freely moveable tumour was easily found; it was slightly larger than a normal kidney. Manipulation did not cause any feeling of nausea. She complained of a continuous dull pain at the lower part of the abdomen. The urine was acid, of a specific gravity of 1030 and contained no albumin, sugar, or blood. On Oct. 24th she had retention of urine for twenty-four hours and complained of a sharp pain in the right flank and the lower part of the abdomen. On the 28th she was anæsthetised with the anæsthetic mixture and an incision between four and five inches long was made in the right flank about an inch below and parallel to the last rib, dividing the old scar at right angles. The incision was deepened through the muscles in front of the anterior border of the quadratus lumborum and entered the kidney which was found to be adherent to the old scar by its upper border so that the kidney could swing freely forwards and upwards. This adhesion was cut through and the kidney was examined, but no stone was discovered. The wound in the kidney was sutured with catgut, the kidney being brought outside the wound. Three stitches were then passed from the anterior aspect of the outer border of the kidney through the cortex to the posterior surface, the

[1] Gazette Médicale de Paris, Sept. 14th, 1895.

ends of the stitches being left long. The kidney was replaced and the ends of the stitches were passed by means of a handled needle from within outwards through the quadratus muscle and the ends were tied so that the kidney was held firmly against the muscle. The wound was sewn up, a drainage tube having been inserted, and a dressing of cyanide gauze was applied. On the following day and for a week later the urine contained some blood. The patient made an uninterrupted recovery, though she complained for some time of general weakness. She was discharged from the hospital on Dec. 1st perfectly well.

CASE 2.—A married woman, aged twenty-eight years, was admitted into King's College Hospital on Dec. 14th, 1897, complaining of a pain and swelling on the right side of the abdomen. In September, 1896, she had first felt pain in the right loin and she noticed that on taking a deep breath she could feel something moving up and down. The pain had gradually become worse up to the date of admission; it was decidedly worse after exertion and shot down the right thigh and round the back. For the four months preceding admission there had been increased frequency of micturition, especially during the night. Eleven weeks before coming to the hospital she had an acute attack of pain which was so severe as to "double her up"; it lasted half an hour. On examination an oval, firm swelling of the size and shape of a kidney was felt on the right side of the abdomen; it was very moveable and could be displaced in any direction. It was only very slightly tender on pressure and but little pain was complained of when the swelling was handled. The right kidney could not be felt in the normal position and there was an absence of kidney dulness on percussion. The urine was acid and contained no albumin, blood, or pus. On Dec. 16th, the patient having been anæsthetised, an incision four inches in length was made in the right loin parallel to the last rib and an inch below it. The incision was deepened until the kidney could be felt and on cutting through a large amount of perinephral fat the kidney was exposed. Catgut sutures were then passed by means of a handled needle through the upper and lower extremities of the kidney and through the quadratus lumborum muscle and tied. The wound was sutured, a drainage tube was inserted, and an antiseptic dressing was applied. The patient made an uninterrupted recovery and except for a slight dragging pain in the loin she has felt perfectly well. Since the operation the urine has been quite normal and has not contained even a trace of blood or albumin.

BRITISH HOSPITAL, BUENOS AYRES.

THREE CASES OF HYDATID OF THE LIVER.

(Under the care of Dr. J. O'CONOR.)

IN THE LANCET[1] last year we published three cases of abscess of the liver which illustrated in a striking manner some of the most important symptoms and complications. The following three cases are drawn from the practice of the same surgeon and demonstrate very clearly the treatment of hydatid of the liver. Though by no means rare in England hydatid disease is decidedly more common in some other parts of the world where naturally surgeons have greater opportunities of studying its treatment. The first case recorded below is remarkable for the large size of the cyst. In the second case, though there was no fluid in the pleural cavity, dulness extended upwards as far as the second intercostal space and the cyst was emptied by an opening through the diaphragm; and in the third case the urticaria which was present is worthy of note. Of all the methods of treating hydatid of the liver the best undoubtedly is to stitch the liver to the edges of the abdominal wound and then to open the cyst by incising the liver. Aspiration is always accompanied by a certain amount of risk of leakage and death in a few minutes has followed in several cases—in one from puncture of the portal vein[2] and in another an echinococcus has passed into the inferior vena cava and so into the heart.[3]

CASE 1. *Hydatid cyst of the liver; cœliotomy; recovery.*—A schoolboy, aged ten years, was admitted to the hospital on Dec. 3rd, 1894, suffering from an enormous hydatid cyst of the liver which occupied almost the whole abdominal cavity; the size of the tumour was very graphically described by the head surgical nurse, Miss Taylor, who said: "You cannot see his face if you stand a few feet from the end of the bed." The boy was emaciated. The apex beat was displaced upwards, the respirations were altogether thoracic and hurried, and the pulse was small and weak. The temperature and urine were normal. On percussing the abdomen no tympanitic note could be found, fluctuation was very distinct, and the abdomen was greatly distended—in fact, he was all abdomen. On the 5th chloroform was very cautiously administered by the anæsthetist, Mr. Luck. A three-inch incision was made in the right semilunar line; as no adhesions existed between the cyst and the parietal peritoneum a medium-sized trocar was inserted and ten pints of clear hydatid fluid were removed. Marsupialisation having been performed in the usual manner the cavity was irrigated and the largest endocyst Dr. O'Conor had ever seen was evacuated. No untoward symptoms appeared until the fourteenth day, when the patient developed a sharp attack of measles. A fortnight later some bile was noticed in the dressings; this gradually increased in quantity until three or four ounces per diem were passed. After a month the biliary fistula closed. The patient then rapidly improved and was discharged recovered on the sixty-sixth day. His mother recently reported that the lad was in excellent health.

CASE 2. *Hydatid tumour of the liver; transthoracic operation; recovery.*—A married woman, aged twenty-five years, was admitted to the hospital on Feb. 3rd, 1895. The patient was transferred to Dr. O'Conor's care by Mr. Petty with the diagnosis of a large hydatid tumour having its origin in the upper part of the liver. The temperature and pulse were normal, the respiration was hurried on exertion, and there was slight cough without sputum. She complained of a dull pain in the right side of the chest which she had noticed gradually increasing for the past six months. On percussion there was dulness extending from the lower border of the second right costal cartilage to the subcostal plane. In the axillary line the dull area was about the same in extent. No air could be heard entering the right lung anteriorly, but posteriorly breath sounds were distinctly audible. On Feb. 5th (assisted by Mr. Shadbolt, Mr. Petty, and Dr. Cruikshank) Dr. O'Conor operated. An aspirating needle was inserted in the fourth intercostal space a little in front of the axillary line and a few drops of clear liquid were drawn off. Chloroform was at once administered and three inches of the fourth rib were resected. When the costal pleura was opened the diaphragm was found to be pushed considerably upwards and on palpation a tense cyst was felt beneath it. The diaphragmatic pleura and the diaphragm were then incised for about two inches and a white non-adherent cyst presented. A medium-sized curved trocar was inserted into the cyst and about five pints of clear hydatid fluid were drawn off; when the walls of the cyst were sufficiently lax the edges of the trocar opening were seized by two sharp hooks and the presenting portion of the cyst wall was drawn through the diaphragm and was sutured to the parietal wound. A large drainage tube was inserted and the cavity was irrigated with a weak solution of permanganate of potassium, but no endocyst appeared. The remaining portion of the external incision was closed by interrupted silk sutures. There is nothing to record in the convalescence excepting a nightly rise of temperature and the dressings had to be changed three times daily as the suppuration was profuse. On March 28th during irrigation the collapsed endocyst appeared and was delivered by the aid of a pair of pressure forceps. After this the cavity rapidly contracted and the patient left the hospital recovered five weeks later. During the past eighteen months she has frequently reported herself and her right thorax appears to be in every respect normal.

CASE 3. *Hydatid tumour of the liver; cœliotomy; recovery.*—A married woman, aged twenty-nine years, was admitted to the hospital on Feb. 27th, 1895. The patient was sent to Dr. O'Conor by Mr. Robert Greene with the diagnosis of a large hydatid cyst of the liver occupying almost the whole of the right half of the abdominal cavity. On March 1st (assisted by Mr. Shadbolt, Mr. Arthur Greene, and Dr. Cruikshank) Dr. O'Conor made a three-inch vertical incision in the right semilunar line. As no adhesion existed with the parietal peritoneum the abdominal cavity was shut off with sponges; a trocar was then inserted into the cyst and about eight pints of clear hydatid

[1] THE LANCET, Oct. 2nd, 1897, p. 858.
[2] Transactions of the Clinical Society, vol. xi., p. 230.
[3] London Medical Record, 1885, p. 414.

fluid were drawn off. The opening into the cyst was next enlarged sufficiently to admit the hand, the endocyst was removed, and the cavity was irrigated with warm (1 in 2000) corrosive sublimate solution. The interior of the cyst was then carefully dried with sponges and some iodoform was dusted in. The opening in the cyst was closed by a continuous silk suture and the mass was returned into the peritoneal cavity; finally the external wound was closed by three continuous silk sutures. The patient felt greatly relieved. The highest temperature recorded was 99·6° F. on the second evening. The wound healed by first intention and the skin suture was removed on the tenth day. On the fifteenth day the temperature suddenly rose to 101·3°. The abdomen was carefully examined but nothing abnormal was noted. On the sixteenth day the nocturnal temperature was 101·6°. The tongue was slightly coated, but there were no abdominal symptoms. On the twenty-first day a profuse nettle-rash appeared which caused the patient considerable discomfort; and notwithstanding a strict milk diet and a liberal allowance of alkalies and magnesia this rash continued going and coming. On the thirty-second day she complained of a slight pain at the site of the incision and on examination a slight fulness was detected at the right costal margin. A hypodermic needle was inserted and a few drops of pus were withdrawn. Chloroform was at once administered and a two-inch incision was made over the puncture. On opening the peritoneum an abscess was suddenly struck; luckily dense adhesions had formed and the peritoneal cavity was firmly shut off. About one pint of pus was evacuated and the abscess cavity proved to be the returned cyst. A large drainage tube was inserted and the cavity was irrigated. Six days later the baneful urticaria disappeared, an uninterrupted convalescence ensued, and she was discharged recovered on May 6th. In September, 1896, she sent word that she was quite well.

Remarks by Dr. O'CONOR.—I wish to call particular attention to the dangerous and useless practice adopted by some surgeons of introducing sutures through the parietes and cyst wall before the latter is at any rate partially emptied. The cyst walls are so extremely thin and tense that it is futile to attempt to insert fixation sutures without entering the cyst cavity. In Case 1 I attempted this manœuvre with the result that at each needle puncture a continuous jet of fluid took place; unfortunately I was unprepared for the mishap and before I could help myself some fluid had entered the peritoneal cavity, but luckily no bad results followed. The tension inside these cysts is so great that liquid will escape through a puncture made by even the finest needle. In two of my cases in which hydatid toxæmia followed aspiration there can be no doubt that it was not the presence of the needle in the cyst that caused it but the escape of hydatid fluid through the puncture hole into a serous cavity where I presume the poison was elaborated and rapidly absorbed into the system. I have never yet introduced into a hydatid cyst in an open wound a trocar, hook, or needle without seeing an escape of fluid; this is bad enough in a patent incision, but infinitely worse in a diagnostic puncture or tapping. I always empty these cysts through a medium-sized aspirating trocar and cannula, taking care before doing so to have the peritoneal cavity well shut off with sponges. When the tension is relieved the cyst is seized by hooks, drawn to the surface, the trocar opening is enlarged, the sponges are removed, and the cyst is fixed to the parietal wound by sutures. In carrying out the last step of the operation the parietal peritoneum is ignored except at the upper and lower angles, my object being to bring about union between the cyst wall and the broad fibrous surfaces of the incision.

Case 2 afforded me a valuable hint, for I have since noticed if the endocyst is not removed at once profuse suppuration ensues, with marked constitutional symptoms, and these continue until the endocyst is expelled. Acting on this, I always continue the primary irrigation until the collapsed cyst is evacuated. Seizing it with forceps is unsatisfactory, for it is so friable that it frequently breaks off. The best method is to attach a long Jacques' catheter to the nozzle of the irrigator and pass it deeply into the cavity; immediately the quivering mass is forced by the pressure of the lotion into the wound and can easily be extracted by a pair of fingers. By this means subsequent suppuration and hectic fever are appreciably diminished.

Case 3 was particularly interesting to me, as it was the first occasion on which I practised Bond's operation, and, as far as I can see, I am not likely to repeat it. Of course, the advocates of this method may justly say that it is absurd to judge it by one case and that my technique was faulty. While most willingly admitting the force of such objections I must say that as marsupialisation is such a safe procedure and as the achievement of complete asepsis occasionally baffles even the ingenuity of the most painstaking surgeon I do not think the game is worth the candle. At the same time I do not consider marsupialisation by any means a Utopian performance, for it entails a long convalescence and frequently the patient is much debilitated before the cavity is finally closed. I think it would facilitate matters greatly if large parietal incisions were made in order to expose thoroughly the cyst. By so doing I feel confident that in the majority of these cases it would be an easy matter to remove a large portion of its wall and suture the remainder if necessary in folds to the external wound. The prolonged attack of urticaria in this case was very puzzling, for at the time I was not cognisant that there was such a thing as hydatid toxic poisoning, much less that nettle-rash was a symptom of it; for this knowledge I am indebted to a recent article in the *British Medical Journal*. In this case it is worthy of note that this toxic symptom did not appear until the twenty-first day after the operation and I presume as there was an elevation of temperature on the fifteenth day suppuration had already commenced in the cavity of the cyst.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Adjourned Discussion on Immunity and Latency after Operations for Cancer of the Breast.

A MEETING of this society was held on Feb. 22nd, the President, Dr. HOWSHIP DICKINSON, being in the chair.

The adjourned discussion on Mr. Marmaduke Sheild's paper on Immunity and Latency after Operations for Cancer of the Breast was resumed by

Mr. PEARCE GOULD, who said that on the threshold of the subject there were serious difficulties arising from our ignorance of the real nature of cancer, which was not much less now than it was twenty years ago. We had little real knowledge of the processes and conditions which regulated the varied developments of the disease. Another difficulty lay in the protean character of cancer, and par excellence, of cancer of the breast, which may terminate life in a few months or may last for many years; may remain limited to one spot for years or may spread all over the body in a few months, choosing any organ or all organs in which to manifest metastasis. From this variability arose the great difficulty in the discussion of the therapeutical problems. In his paper Mr. Sheild had presented a double series of facts, dealing first with cases in which there had been no return for many years, the patients having died from other diseases. These cases had been clearly successfully treated by operation, but before they could logically be called "cures" it would be necessary that the patients should have lived beyond the longest period after operation at which recurrence had ever occurred and that all the organs, including the bones, had been examined by a competent pathologist and found to be free from secondary growth, but it sufficed for practical purposes to show that the patient died after the lapse of some years of some other disease. In estimating how far the immunity was due to the operation the course of the disease in patients who had not been operated on must be borne in mind and it must also be remembered that for every case of immunity after operation any surgeon could point to many in which there was no such prolonged immunity. Mr. Hulke had prepared for him a table showing the number of patients suffering from cancer of the breast who had died in the cancer wards of the Middlesex Hospital during the last ten years, during which time the type may be assumed to have remained constant. Twenty-six patients had died on whom no operation had been performed and the average duration of the disease was forty-five months, the shortest being four months and the longest twelve years. Forty-eight patients had died who had been subjected to one or

more operations, and in these the average duration of life was forty-six months, but while in these cases the shortest period was four months, as in the previous series, the longest was twenty-five years. Put in another form the statistics showed that of the cases not operated on 61·5 per cent. were dead within three years and of those operated on 50 per cent. Of those not operated on 76 per cent. were dead within six years, against 89·5 per cent. of those operated on. Hence it was clear that there was another side to the question, and that the immunity might be due to the variability of the disease as well as to the direct effect of operation. He did not regard subsequent occurrence of cancer, except in some cases in the opposite breast, as fresh attacks of cancer, but as true metastatic growths, these late recurrences developing in the same organs and tissues as the early secondary growths and in positions which were rarely the seat of primary scirrhus. The influence of the operation on the cancer was merely the removal of infected and infective tissue by amputation and the cancer could no more be said to be cured than gangrene could be said to be cured by the amputation of the leg. With our knowledge of the natural course of cancer the actual results of treatment might be anticipated, that often operation would be too late, secondary growths having commenced, but that sometimes recurrence might be prevented by early operation. From the nature of the disease it might have been expected, as was proved to be the case, that in some cases recurrence would be local and in others that there would be distant metastasis. The terms "complete" and "incomplete" were unfortunate and unjustifiable; "adequate" and "inadequate" were not much better. He preferred to divide the cases into "successful" and "unsuccessful" according to whether recurrence took place or not.

Mr. WATSON CHEYNE said that two years ago he had brought forward the results of twenty-two cases operated on by the new method, of whom thirteen were alive and free from recurrence now, more than three years after the operation. He did his best to find statistics of the results of the old operation and he found that from 10 to 18 per cent. were free from disease for three years or more. He was accustomed to remove the whole breast and the primary lymphatic tract in connexion with it, clearing out the axilla thoroughly. He did not mean to imply that in every case widespread infection had taken place, as it had been shown that in rare cases there was no recurrence even when the whole breast was not removed. Put shortly, the question was this, Were surgeons to be content with from 10 to 18 per cent. of successes or should they subject their patients to the more extensive Heidenhain-Stiles procedure in order to obtain from 40 to 50 per cent.? He was willing to admit that of his twenty successful cases several would have been completely relieved by the old method, but he could not tell at the time of operation, nor could he tell now, which would have been safe to leave. As to Mr. Sheild's second table dealing with latency in cases where recurrence ultimately occurred he remarked that there were three possible explanations: (*a*) that there was real latency, the cells lying dormant and springing into activity under some fresh stimulus; (*b*) that fresh development of cancer occurred; and (*c*) that there was very slow growth of cancer cells, as in atrophic scirrhus, so that it was long before the growths were tangible. In the majority of Mr. Sheild's cases recurrence took place in the neighbourhood of the scar. This was used as a proof of dormancy, but it was equally well explained as a second attack of cancer. The absence of recurrence in the opposite breast was also seen in cases left to themselves and it suggested that there was some previous local condition which led to the deposit of cancer in the affected breast and he suggested that it might also predispose to the occurrence of fresh deposits in the neighbourhood. He thought that the cases quoted favoured the operation of the Heidenhain-Stiles operation as the local recurrences occurred in tissues which would have been removed at the operation by that method. The theory of dormancy did not fully account for the late development of local metastases as they might be due to the very slow growth of cancer cells. The possibility of dormancy appeared to be indicated by Beatson's observation on the retrogression of cancer of the breast in certain cases after oöphorectomy. In one of the cases, however, he had been informed, the growth was again becoming active after a period of quiescence lasting for some years. In two cases on which he had performed oöphorectomy there was temporary diminution in the growth, but at the end of six months it was growing faster than ever. He thought that if three years passed without recurrence the term "cure" was fairly accurate, as in 85 per cent. of those who passed that term there was no recurrence. Of his own cases none in which the patients had passed the three years' limit had had any recurrence up to the present time. As to the frequency of metastatic deposits he believed that 90 per cent. of the cases that died, whether operated on or not, would show deposits. In recorded cases they were often not mentioned because no necropsy had been performed and the growths might not be of sufficient size to be detected. He agreed that the terms "complete" and "incomplete" were unsatisfactory. He also objected to calling the operation Halsted's operation. The investigations had been made and the rules for operation laid down by Heidenhain and Stiles and cases had been operated on and published by surgeons in this country and in Germany following the directions of those surgeons before Halsted published his cases. He preferred to speak of it as the Heidenhain-Stiles operation.

Dr. NORMAN MOORE thought that the pathological aspect of the question had been somewhat neglected. He did not think that there was any pathological evidence that second attacks of cancer occurred. He was unaware of any case in which a patient suffering from cancer of the mamma developed, for instance, cancer of the pylorus. The question of how far infection extended from the focus was not yet settled. He thought that the term "metastasis" should not be employed as it had an established use with another signification. He thought that an attempt ought to be made to discover at the time of operation whether infection of the internal organs had taken place. Much was already known of the general distribution of secondary growths, but there were often special groupings according to the position of the primary growth. Thus in cancer of the œsophagus secondary deposits were especially apt to occur in the kidney and heart.

Mr. W. H. BENNETT said that the term "cure" was understood by the ordinary man to mean complete and permanent relief from his disease and this could not be promised even after three years. There was a risk that by the use of the term "cure" inaccurately the profession might lose some of the reputation for candour and honesty that they at present enjoyed. He strongly dissented from the view that recurrences could in any case be looked on as analogous to repeated attacks of some acute disease such as pneumonia. These cases were not comparable, as pneumonia tended to a natural resolution while cancer was progressive. It was conceivable that some of the instances of development of cancer in the opposite breast were instances of fresh infection, but they were very rare. Recurrence almost always took place in direct lymphatic connexion with the original growth. As an example of the vagaries of cancer he mentioned two cases in which he removed both breasts. One woman, who had much the stronger physique, died from recurrence within nine months, while the other, who was operated on at about the same time, was alive and well at the present time. He was accustomed to remove the breast freely and to clear out the axilla in all cases, but he did not remove the pectoral muscle unless it was involved. He had seen cancer recur in the muscle, but it was rare. He wanted information whether there was proportional benefit to the patient corresponding to the greater severity of the new operation and whether the actual mortality was increased.

Mr. TREVES said that he did not think that the time was ripe for any dogmatic conclusion on the question as much of the evidence was very conflicting. It was quite clear that our knowledge of the nature of cancer was very little advanced from where it stood at the beginning of the century. The geographical distribution of cancer, the variations in the course of the disease and in the rapidity of recurrence, the disappearance of cutaneous nodules, as in Mr. Bryant's cases, and the effects of removal of the ovaries were at present quite unintelligible. He doubted whether we were even justified in assuming that excision was the right and proper treatment, although it was the best available at the present time. He reminded the society that many years ago an aneurysm was regarded as a malignant growth and the more clot it contained the more malignant it was supposed to be. On this mistaken view of its pathology it was considered proper to excise the sac. When the pathology of cancer was properly understood he believed that many of the present methods of treatment would be discredited. He did not think that the cases which had

been adduced showed the new operation in a very brilliant light and they showed that the old method did not deserve the contemptuous way in which it was often spoken of. He asked whether the new operation involved more risk to life or left the patient with a less useful arm. He mentioned two patients whom he had seen twelve months after the operation had been performed by a competent surgeon. The patients' condition then was deplorable. There was recurrence in both the scar and the axilla, the arm was firmly bound to the trunk, the hand was œdematous, and there was constant neuralgic pain in the arm, which was paralysed in one of the patients.

Mr. MARMADUKE SHEILD, in reply, said that the object of his paper had been mainly to find out the results of the old operation and he had not anticipated that the discussion would develop into a comparison of the old and the new methods. He himself did not think that the time had come for forming any definite conclusions. He hoped that the debate would encourage surgeons to bring forward series of cases which had been submitted to the more thorough operation. The senior surgeons appeared to be in favour of removing the breast only unless there were tangible disease elsewhere, while some others adopted the more severe method, removing the breast, pectoral muscle and fascia, and all the contents of the axilla, including often part of the axillary vein. Many adopted a middle course. He had not quoted in his paper a very large number of cases after operation by the lesser method as he had only asked for figures from surgeons whom he knew personally. Many additional cases had been quoted during the discussion and notes of others had been sent to him. It was clear that the majority of the surgeons did not adopt the dictum of Volkmann as to cases being cured after three years. Mr. Watson Cheyne had argued in favour of regarding secondary growths as fresh attacks, but he was unable to adopt that view, in spite of its endorsement by Mr. Hutchinson and Mr. Butlin, two past Presidents of the Pathological Society. Secondary growths were common in glands and in bones, situations in which primary scirrhus rarely occurred. Recurrence was most common in the lungs and liver, which were in direct lymphatic connexion with the breast. If an outlying operation only were involved he would only remove the breast. The axilla should always be opened, as microscopic sections showed that in the muscle and in the axillary fat groups of cancer cells could be traced which could not possibly be detected by the naked eye. He did not remove the pectoral muscle as a rule, but when he wanted to clear out the axilla very thoroughly he removed the sternal part of the pectoral muscle, which gave him plenty of room. Removal of the breast had been spoken of as an easy affair, but he wished to insist that it required the greatest care and skill. He thought that some of the cases had fallen into the hands of surgeons in whom due sense of proportion was lacking. He considered the operation of sawing through the clavicle and removing the arm in order to clear out the axilla quite unjustifiable. Mr. Sheild agreed that the term "cure" could never be used in connexion with cancer in the sense that it was used in speaking of the removal of a lipoma and he thought it important that in dealing with malignant diseases the terms used should be accurate and unequivocal. He did not wish to be regarded as a pessimist and he thought that the cases he had collected would justify the surgeon in encouraging patients although a definite prognosis of cure could not be given.

SOCIETY OF ANÆSTHETISTS.

Dosage in Anæsthetics.

A MEETING of this society was held on Feb. 17th, the President, Dr. DUDLEY BUXTON, being in the chair.

Professor WALLER, referred to the experiments of Snow which showed that definite dosage of chloroform produced in man as well as in the lower animals results directly proportionally to the quantity inhaled. Snow, Paul Bert, and his own experiments coincided and showed that double the dose which produced anæsthesia caused death. Although a titrated method such as was employed by Paul Bert was too cumbersome for general adoption yet some apparatus, such as Junker's, allowed a certain degree of accurate dosage. The "open method" or "slapdash method" failed entirely to do this. Professor Waller then referred to his method of subjecting isolated nerve to the vapour of different anæsthetics and judging of their effect by noting the electric excitability by means of a galvanometer. His results were that ether affected nerve seven times less than chloroform. The effect of carbonic dioxide was, as he had previously showed, rather antagonistic than adjuvant to chloroform. Judging from nerve tissue he had shown that 1 per cent. excited, 2 per cent. anæsthetised, and greater strength destroyed the nerve. Clinical results (Dr. Carter of Weymouth, &c.) further demonstrated that very small doses maintained anæsthesia.

The PRESIDENT thought Professor Waller was right in insisting that a given dose of an anæsthetic produces anæsthesia while another causes death. It was, moreover, reducing a complex question to the simplest conditions to deal with isolated nerve, but the problem of dosing an intact human being presented greater complications. All admitted the importance of dosage except the advocates of the "open method," but no apparatus or method at present in use completely fulfilled all theoretical requirements. Elimination, at least as important a factor in safe anæsthetisation as a regulated intake, was a purely vito-physical process and was in many cases extremely difficult to measure. The cases of Dr. R. W. Carter were too few and too trifling for any reliable conclusions to be drawn from them. But no doubt existed in his (the President's) mind that with care and experience it was possible to equalise income and expenditure when a regulating apparatus was employed.

Dr. BRADFORD from his experiments was led to believe that while a gradual increase in the dose of chloroform caused death by asphyxia the heart was affected secondarily and the animal was recoverable, but if an animal were plunged into a saturated atmosphere the heart stopped at once and no stimulation succeeded in restoring its function.

Dr. WRIGHT, who took exception to the statement that a saturated cloth held to the snout caused irrecoverable heart failure, suggested that opening the carotid artery to get rid of the chloroform-laden blood and lessen the work of the heart was the best method of resuscitating in chloroform poisoning.

Dr. HEYWOOD SMITH referred to an apparatus in which the air was aspirated by the patient over the chloroform. It was the invention of Dr. Protheroe Smith, and possessed the advantage that when the respirations were weakened the amount of vapour taken was lessened.

Mr. GRANT MORRIS thought they wanted a "method" as well as a theory. All the apparatus, even Junker's, failed in some cases.

Mr. WOODHOUSE BRAINE said the method did exist, and had been suggested by the late Mr. Clover. In many thousand cases only one death had occurred.

Dr. COOKE deprecated the existing methods, especially the use of the A.C.E. mixture from a cone. After some remarks from the PRESIDENT, Professor WALLER replied.

An interesting lantern slide demonstration of Professor Waller's experiments on Nerve was given.

LIVERPOOL MEDICAL INSTITUTION.

Exhibition of Cases.—Blackwater Fever.—Anti streptococcic Serum in Puerperal Fever.

A MEETING of this society was held on Feb. 17th, Dr. MACFIE CAMPBELL being in the chair.

It was resolved that a poll be taken of the members as to the desirability of commencing the ordinary meetings at 8.30 instead of 8 P.M.

Mr. T. H. BICKERTON showed the following cases: (1) Molluscum Contagiosum; (2) Double Glaucoma in a child, aged eight years; and (3) Crystalline Lens undergoing Absorption after removal of a piece of steel from it by an electro-magnet.

Dr. G. STOPFORD TAYLOR showed a boy, aged thirteen years, affected with Ichthyosis. The disease was general and symmetrical in distribution and the scales were greyish-green. The axillæ, flexures of the elbow and knee, the intergluteal furrow, the genitals, and the inner side of the thigh and feet and toes were not affected, the skin being supple and moist there. The face was dry and harsh, the hair was poor, and the finger-nails were pitted and rough.

Dr. T. R. BRADSHAW showed a man, twenty-six years of age, who had suffered from an attack of Acute Anterior Poliomyelitis. There was wasting of various muscles in both arms,

the appearance suggesting progressive muscular atrophy. The paralysis came on acutely during a sharp febrile attack last May and was followed by rapid wasting. The legs were not affected at any time, there was no tendency for the atrophy to spread and a gradual improvement was taking place. It was pointed out that the mode of onset, distribution and wasting indicated that the affection was of the same nature as acute spinal paralysis in children. The extreme rarity of the disease in adults was alluded to.

Mr. G. P. NEWBOLT read notes of a case of Arterio-venous Aneurysm of the Popliteal Vessels in which he ligatured the popliteal artery and vein each in two places. The patient made a good recovery.—The PRESIDENT, Mr. PAUL, and Mr. LARKIN spoke.

Mr. STANLEY KELLETT SMITH read a note on Blackwater Fever based on his experience of the disease in Central Africa. Tomaselli's views were cited for the purpose of drawing attention to the lack of full evidence as to the relation between quinine and the red blood-cell. Taking the opinion that "blackwater" was entirely malarial in nature he (Mr. Smith) thought it possible that the failure of quinine in many cases might be due to the aggressive action of the drug upon the malarial parasite being masked by its own chemical effects upon the blood and excretory organs.—Dr. CARTER drew attention to the great value of Warburg's tincture in the disease and instanced a case where its administration changed the nature of the fever from remittent to intermittent, the patient recovering. Opium was also given.—Dr. ABRAM, Dr. GIVEN, Mr. BURNS GEMMELL, Dr. CRAIGMILE, and Dr. A. DAVIDSON spoke.

Dr. NATHAN RAW read a paper on the Value of Anti-streptococcic Serum in Puerperal Fever which was published in THE LANCET of Feb. 19th.—Dr. C. A. HILL recorded the results of his examination of the dried serum used, as also of the patient's urine and blood after the injection, which all contained living streptococci.—Dr. HEATHERLEY drew attention to a paper read before the Guy's Hospital Physical Society by Mr. TURNER, in which it was stated that the Pasteur Institute had succeeded in obtaining a serum by injecting pure toxins, thereby placing it on the same basis as diphtheria antitoxic serum.—Dr. E. T. DAVIES thought the case recorded to be one of sapræmia and that by clearing away débris and blood-clot with douching the patient would probably have recovered without any serum injection. He suggested caution with such a dangerous remedy and a certain diagnosis of streptococcic infection being made first.—Dr. ABRAM pointed out that in most of the cases mentioned where no apparent benefit followed the use of the serum there was no proof that the patient was suffering from streptococcic infection.—An interesting discussion was kept up by Mr. STANSFELD, Dr. ALEXANDER, Dr. BUCHANAN, Dr. GRÜNBAUM, Dr. GEMMELL, Dr. MONSARRAT, and Mr. THELWALL THOMAS, opinions somewhat differing.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Relapse in Typhoid Fever.—Heredity in Disease.—Cerebellar Tumour.

A MEETING of this society was held on Jan. 14th in Leeds General Infirmary, Dr. BRAITHWAITE, the President, being in the chair.

Dr. CHURTON showed a boy, aged seventeen years, who had had a relapse of Typhoid Fever. After defervescence on the twenty-first day of the fever he was exceedingly impatient of restrictions in diet and obtained food from other patients. At length, twenty-two days after defervescence a regular relapse began and lasted three weeks. To prevent his desire for solid food he was placed in a private ward out of sight and smell of the meals of other patients, where he took with perfect contentment no other food than milk for four weeks. Three months after recovery he was exceedingly well and had become quite stout.

Dr. CHURTON related some cases observed by him which seemed to justify the proposition that a person is liable to, or has a proclivity to, the diseases of the parent whom he most distinctly resembles and not those of the other parent. Thus (1) a man, aged sixty-three years, with no apparent cause for any illness, had cancer of the œsophagus. His father died from apoplexy in his seventy-eighth year, but his mother, whom he closely resembled in features and disposition, died from cancer of the stomach in her sixty-third year. (2) A lady complaining of various neuroses states that she is one of a family of eleven children; that of these all having dark complexions like the mother are alive all strong, but all with fair complexions like the father were delicate and, except herself, are all dead. (3) A man, thirty-seven years of age, has wasting diabetes. His mother, whom he greatly resembles, died from that disease at forty years of age. His brothers and sisters, the eldest aged forty-seven years, resembled the father and are quite well. Several similar instances were mentioned. Apparent exceptions had been met with, but none of them had hitherto withstood investigation.

Dr. E. W. SELBY (Doncaster) read a paper on a case of Cerebellar Tumour in a boy, seven years of age. Death occurred at the end of two months. At the necropsy a soft, smooth, globular tumour the size of a large walnut was found in the centre of the cerebellum springing from the middle lobe. It was a round-celled sarcoma.

Mr. MOYNIHAN read a paper on the Operation of Gastrorrhaphy with notes of a case. We hope to publish the paper in full shortly.

Cerebral Abscess.—Malignant Scarlet Fever.

A meeting of the society was held on Feb. 4th in Leeds General Infirmary, Dr. BRAITHWAITE, the President, being in the chair.

Mr. ROPER described a case of Cerebral Abscess under his care. The patient, who was fourteen years of age, had left otorrhœa for two years. Lately the discharge had become fœtid and there had been severe pain in the left ear and side of the head lasting from three to four days. Afterwards there was loss of memory for words, slow pulse, slight rise of temperature, vomiting, and loss of power in the right arm. There was no mastoid tenderness. Double optic neuritis was present. Mr. Roper asked Mr. Littlewood to see the case with a view to operation. The temporo-sphenoidal region of the brain was explored and an abscess was found and drained. The arm recovered its power at once, the memory returned gradually, and the patient is now quite well.

Dr. TREVELYAN read notes of a case of Malignant Scarlet Fever occurring in a patient aged twenty-five years. The illness began within twenty-four hours after exposure. A patchy rash appeared on the second day and some petechiæ on the fourth day. Death occurred on the thirteenth day from broncho-pneumonia.

GLASGOW SOUTHERN MEDICAL SOCIETY.

The Use of Forceps in Obstetrical Practice.

A MEETING of this society was held on Feb. 17th, the President, Dr. JAMES W. ALLAN, being in the chair.

A discussion on the Use of Forceps in Obstetrical Practice was opened by Mr. STUART NAIRNE, who answered the following questions: When should the forceps be used? What kind of forceps should be used? and How to use the forceps? Since the introduction of chloroform the use of forceps had been extended. In easy cases the woman might be allowed a choice. In some cases they must be used, and when used they must be used skilfully. With an anæsthetic it is not bad midwifery to expedite delivery in all cases. There are benefits and dangers in the use of forceps. The patients benefit mentally and physically. They need not suffer in any way; the period of delivery may be much shortened; properly conducted instrumental delivery never hinders recovery, but here the "personal equation" comes in. Accidents can be avoided; danger lies in (1) too early application and (2) too late application. Judgment is essential, errors are due to stupidity and ignorance—again the "personal equation" was invoked—the proper method is to eliminate the stupid person. A man should use the forceps which he prefers and not insist on their use being universal. That forceps are abused to the extent recently asserted Mr. Nairne absolutely denied. He spoke for Glasgow, not for another large city, and was of the opinion that the error in Glasgow was one of omission not of commission. In easy cases forceps ought not to be applied without the offer of an anæsthetic and this offer should be made as soon as the patient desires. In tedious cases the use of anæsthetic and forceps should be insisted

upon if necessary. In difficult and dangerous cases the use of anæsthetic and forceps is compulsory. When he was in general practice he had used forceps in nearly every case and in his whole obstetric practice had had only some six deaths.

Professor MURDOCH CAMERON did not agree with all that that Mr. Nairne had said. He had seen many instances of the abuse of forceps, and these were described at great length in his characteristic and humorous manner. Careful measurement of the conjugate should always be made before using forceps to make sure a head could come through. Leishman's long straight forceps tend to lacerate the vagina and tear the perineum as it was difficult to get good adaptation of the blades to the head. The perineum should in all cases be prepared for the use of forceps. Introducing the cone-shaped hand into the vagina the fist is closed and withdrawn again and again until there is sufficient dilatation induced for the head to pass. The dorsal position is by far the best, and in simple cases the forceps should be inserted first and chloroform used afterwards; very little is required and the patient, anxious for relief, inhales it readily. All the modern forms of forceps were shown and commented on. Smellie's wooden forceps were also passed round. Dr. Cameron's axis-traction antero-posterior forceps and a cephalotribe on the same principle were shown.

Dr. JAMES K. KELLY had when in general practice used forceps in about 10 per cent. of his cases and always those he was taught to use—viz., Leishman's straight forceps—applying these even above the brim. Forceps are used to supply defective power—owing to weak "pains"—weak in relation to size of parts concerned or in regard to time. The following were the conditions in which he considered the use of forceps necessary: (1) the membranes ruptured; (2) the os sufficiently dilated or dilatable; (3) the head should have engaged or entered or should not be moveable above the brim; and (4) the head should be of suitable size, not too large or too small—e.g., hydrocephalic or six months' fœtus. When the pelvis is small a difference of opinion as to the use of forceps comes in. Where delivery is possible without diminishing the size of the fœtus forceps may be used—i.e., where nature could in time complete the case. Forceps may be tried down to very great degrees of contraction; owing to the structure and mobility between the pelvic joints a wedge-like action of the head is possible. The use and benefit of Walcher's position and symphysiotomy show that there must be such mobility of the pelvic joints. If there is such even to a small degree it justifies a trial of forceps. In more than 3000 cases Dr. Kelly had had no Cæsarean section, craniotomy, or embryotomy—only forceps, and among these patients there must have been a considerable number of cases of contracted pelvis. He had no accidents and had never had a case of rupture of the uterus.

The discussion was adjourned until the next ordinary meeting of the society.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Vaginal Colpotomy.

A MEETING of this section was held on Feb. 11th, Dr. F. W. KIDD, the President, being in the chair.

Mr. T. HENRY WILSON read a paper entitled "Vaginal Colpotomy; its Advantages and Limitations," confining his remarks to the treatment of pelvic tumours and adhesions. Having described the method of anterior colpotomy, he pointed out the facility with which the adnexa may be drawn down and examined, adhesions of the ovaries separated, and tubes and ovaries removed or, if found healthy, replaced. Small subperitoneal myomata, if pedunculated, may be ligated, or if sessile incised, removed, and the peritoneum closed over. Small ovarian and parovarian cystomata may likewise be easily treated, or if too large the contents may first be evacuated, the pedicle tied, and the cyst removed. He then dwelt specially on the treatment of pyosalpinx by this method and laid stress upon the usual site of rupture of the pus sac when separating adhesions—namely, the posterior surface, which is the most unfavourable situation in operating by cœliotomy but favourable by vaginal colpotomy. Having described the operation of posterior colpotomy he discussed the question of pelvic hæmatocele and pelvic abscess, pointing out the great advantage which this method presented for efficient drainage. Densely adherent ovaries deeply situated in Douglas's pouch he regarded as suitable for the posterior operation, but he deprecated treatment of ruptured tubal pregnancy by the vaginal method. Two difficulties in colpotomy were emphasised—viz, rendering the vagina aseptic and reaching the peritoneum. No one should undertake vaginal colpotomy who was not prepared to open the abdomen if found necessary as there was always present the danger of uncontrollable hæmorrhage and the possibility of being unable to complete the operation from below.

The PRESIDENT said that in some cases it is absolutely impossible to diagnose whether one is dealing with a single or a double salpingitis.

Dr. A. J. SMITH thought that for prolapsed ovaries and catarrhal tubes it was a matter of slight difference whether the abdomen was opened from below or above.

Dr. HENRY JELLETT thought that enough importance was not given to vaginal cœliotomy as a means of diagnosis pure and simple.

Dr. SMYLY said that whether posterior or anterior colpotomy should be performed depended upon the circumstances of the case, whether the uterus was anteverted or retroverted and where the pathological condition was situated. He did not approve of Dührssen's method of anterior colpotomy, but of Mackenrodt's. In pyosalpinx the uterus is really infected before the tubes and unless the uterus is removed the disease is not cured.

Dr. R. D. PUREFOY thought that vaginal colpotomy was very suitable for small moveable tumours whatever their origin, but that it was not as good as laparotomy for most cases of pyosalpinx and tubal pregnancy. He was quite unable to accept the proposition that in every case of pyosalpinx the uterus should be removed.

Dr. WINIFRED DICKSON thought that it was a great advantage not to have an abdominal incision.

BOMBAY MEDICAL AND PHYSICAL SOCIETY.

Subcutaneous Symphysiotomy.—Cystic Disease of the Kidney.

THE annual general meeting of this society was held in the University Library on Jan. 7th, Surgeon-Major-General G. BAINBRIDGE, M.D. Durh., F.R.C.S. Irel., the President, being in the chair.

The names of the committee for 1898 were announced as follows: President: Surgeon-Major-General G. Bainbridge, M.D Durh., F.R.C.S. Irel. Secretary and treasurer: Surgeon Captain H. Herbert, M.R.C.S. Eng., L.R.C.P. Lond. Members: Surgeon-Colonel G. W. R. Hay, M.D. Edin.; Brigade-Surgeon-Lieutenant-Colonel F. C. Barker, M.D. R.U.I., F.R.C.S. Irel.; Surgeon-Lieutenant-Colonel H. W. B. Boyd, F.R.C.S. Irel.; Surgeon-Lieutenant-Colonel W. K. Hatch, M.B., C.M. Aberd., F.R.C.S. Eng.: Surgeon-Major H. P. Dimmock, M.R.C.S. Eng., L.R.C.P. Lond.; Brigade-Surgeon-Lieutenant-Colonel J. M. Beamish, M.D. R.U.I.; Dr. Edulji Nashirvanji; and Dr. Temulji Bhicaji Nariman.

Surgeon-Major H. P. DIMMOCK read a paper on Subcutaneous Symphysiotomy. After delivery he has the woman kept on her side with a shot bag weighing about 9 lb. placed over the upper hip, the result being that the surfaces of the symphysis are maintained in apposition and fibrous union takes place very satisfactorily. Three months' rest was required and he would not operate unless this could be secured.

Surgeon-Lieutenant-Colonel W. K. HATCH gave particulars of a case of Cystic Disease of the Kidney in which he had operated. The kidney was of the horseshoe variety; the portion removed was on the left side; no ureter could be found in connexion with it. The patient is recovering.

Mr. J. T. LEON described Unna's Method of Staining Ringworm and Allied Fungi.

VACCINATION AT EXETER.—It was reported at the meeting of the St. Thomas Board of Guardians (Exeter) that during 1896 there were 1306 births in the district and there had been 1055 successful vaccinations, 101 deaths, 96 postponements, and 42 removals.

Reviews and Notices of Books.

A Practical Text-book of the Diseases of Women. By ARTHUR H. N. LEWERS, M.D. Lond., Obstetric Physician to the London Hospital. Fifth Edition. London: H. K. Lewis. 1897. Price 10*s.* 6*d.*

THE fourth edition of this excellent manual appeared in 1893 and in issuing this new edition the author has taken the opportunity of thoroughly revising the entire work and enlarging many of the chapters, especially those dealing with tubal pregnancy, the surgical treatment of uterine fibroids, and the radical treatment of cancer of the uterus. Tubal pregnancy has been more fully studied and several interesting cases are recorded. There is one case deserving of special notice as its details are very instructive in which two abdominal sections were performed within twelve months. At the first operation there was found a three months' fœtus lying among the intestines. A good recovery was made but in about a year afterwards the patient suffered from somewhat similar symptoms. Dr. Lewers, with commendable candour, relates that a diagnosis of tubal gestation was again made and abdominal section was decided on. The day before the proposed operation, however, the patient passed a blighted ovum of about the size of a hen's egg from the uterus which had been known to be enlarged. The lateral fulness still remained and the operation as arranged was performed. The swelling to the left of the uterus which had been thought at first to be a tubal gestation was found to be a small ovarian tumour of about the size of a cocoa-nut. It was removed and the patient made a good recovery.

Questions connected with the treatment of uterine fibromyomata have received very careful consideration, especially the operative measures of hysterectomy with intraperitoneal treatment of the stump and pan-hysterectomy, illustrative cases treated by each method being recorded. There is noted a case of so called decidua malignum which the author considers one of primary sarcoma affecting the posterior wall of the uterus, near the fundus and developing quite independently of pregnancy. Dr. Lewers's statistics of radical operations for uterine cancer are satisfactory. He has had more than sixty radical operations and over thirty of these have been supravaginal amputations of the cervix without a death; in thirty of the vaginal hysterectomies there have been only three deaths. We observe with regret that the author sometimes shows a want of precision in the use of anatomical terms while describing a patient's symptoms, employing on more than one occasion the expression "pain in the stomach" when he evidently means the lower part of the abdomen. On the other hand, we are glad to note that in this manual Dr. Lewers exemplifies from his own practice the methods of treatment which he recommends. The work is not only a valuable text-book for students and practitioners but in many of its chapters a book to be consulted by gynæcologists.

The Relief and Cure of Spinal Curvatures. By PERCY G LEWIS, M.D. Brux., M.R.C.S. Eng., Honorary Medical Officer to the Victoria Hospital and Surgeon to St. Andrew's Convalescent Home, Folkestone, &c. Containing over 50 Original Illustrations. London: John Bale, Sons, and Danielsson, Limited. 1897. Pp. xii. and 208. Price 7*s.* 6*d.* net.

IN the preface we are told that these chapters have been written "for the general practitioner by a general practitioner, in the hope that they may aid in the simplification of the treatment of spinal curvatures and help in the clearing away of many of the mysteries which have previously surrounded the subject," and we think that the author may claim with reason that he has achieved his purpose. The treatment of curvature of the spine has suffered from two totally different causes; it has on the one hand been neglected as of but little importance and on the other it has been considered of such severity and complexity that it has required the services of a "specialist" and an instrument-maker. The majority of the cases of spinal curvature are very amenable to treatment, especially if seen early, but most medical men require more knowledge of the subject than is usually possessed at the time of obtaining the qualifying diploma and Dr. Lewis's work would in great part supply this deficiency. The directions for treatment are on the whole excellent and may be followed with advantage. The chapter on "medical exercises" is especially good. The work is illustrated by reproductions of photographs of cases and by numerous little diagrams showing the method of carrying out the various mechanical exercises which are advised. It may be added that the spinal curvatures treated in this book do not include the "angular curvatures of the spine" which are the result of caries.

Lectures on Angina Pectoris and Allied States. By WILLIAM OSLER, M.D., F.R.C.P. New York: D. Appleton and Co. 1897. Pp. 160.

ANGINA pectoris is historically of great interest and the story of its discovery by Edward Jenner and his reluctance to make his facts known to the public because his friend John Hunter was, as he rightly thought, the subject of this disease formed an appropriate introduction to Professor Osler's admirable lectures. It is a disease comparatively rarely met with in hospital practice and, like migraine, it numbers among its victims many prominent and distinguished persons, the Arnold family being a remarkable instance in point. In seven years' hospital practice at the Johns Hopkins Hospital there have only been four cases, while Professor Osler has seen sixty cases in private. Physicians are comparatively often affected, there being thirteen amongst the author's cases, and we see with grim satisfaction that he says of angina, as Sydenham did of gout, that it attacks more wise men than fools. A simple classification is given of angina pectoris vera with organic heart disease and of pseudo-angina, under which hysterical, vaso-motor, and toxic forms are included. His graphic description of the symptoms of true angina is illustrated by numerous cases and by quotations extending from Seneca's account of his own sensations down to the present day. The pain, dolor pectoris, and the mental anguish, angina animi are fully dwelt on, and angina sine dolore (Gairdner) and other states allied to true angina, such as syncope anginosa and the Adams Stokes syndrome, are dealt with in a separate chapter.

The existence of pseudo-angina is fully recognised by Professor Osler, and the characters that distinguish it from true angina—i.e., that its victims are chiefly women, that it occurs at an earlier age, and the absence of a fatal termination, are clearly set forth. Two main groups of functional angina are described: (1) the neurotic, including hysterical, vaso-motorial, and reflex anginas; and (2) toxic angina, due to tobacco, tea, and coffee; but of the two latter causes Professor Osler has no experience.

Passing to the theories of true angina we find a full and interesting account of the theory of intermittent claudication which explains the relation between coronary disease and the crises of angina. Generally ascribed to Potain (1870), this hypothesis is shown to have been first and clearly stated by Allan Burns (1809). The state of the cardiac muscle and the seat and cause of the pain in angina are discussed and some interesting though cautious reflections are made on the vaso-motor changes in angina.

The difficulties that may arise in the diagnosis of true from false angina are insisted upon and the section on treatment is full of wise counsels and the lessons of wide experience. In conclusion, we may say that these lectures supply a full and philosophic account of angina pectoris told in scholarly language and illustrated by many historical cases.

La Responsabilité Médicale. By P. BROUARDEL. Paris: J. B. Baillière et Fils. 1898. Pp. 456.

THE "responsibility" of a medical man has never been stated with precision. It has been differently interpreted under varying circumstances and the code of one country is different from that of another. No one is more qualified to express an opinion on such subjects than Dr. Brouardel, consequently this volume will be read with interest by all medical men and it is to be hoped that an English edition will soon be forthcoming.

The first chapter deals with the general theory of medical responsibility, its history and its position at the present time, and the position of a medical man towards society. The author further proceeds to discuss the various suggestions that have been made as to the tribunals before which a case of professional misconduct should be tried, but in this respect the French code varies much from ours and comparison is of very little use.

The second chapter is an exhaustive review of the "professional secret." The author deals with the subject in a most thorough and impartial manner and the perusal is rendered especially interesting by the large number of illustrative cases quoted. We next find the laws in relation to birth dealt with from the point of view of the medical man and then the question of real and apparent death and certain matters respecting the disposal of the dead. Chapter V. deals with the vexed question of expert evidence; here again the methods of French procedure differing in many respects from our own render some of the sections into which the chapter is divided of less value to the English reader than they otherwise would be.

The remainder of the work is occupied with the reports of actual cases which have been brought under the notice of the author. They have evidently been carefully selected and this section forms by no means the least interesting part of the work.

To those readers who are especially interested in these matters we can cordially recommend the book. It contains a mass of interesting material and original thought. In some respects English readers will, as we have already suggested, have a little difficulty in following Dr. Brouardel's reasonings, but the great portion of the book will be of great value to all members of the medical and legal professions.

LIBRARY TABLE.

Notes on the More Common Diseases of the Eye. By ROBERT W. DOYNE, Surgeon to the Oxford Eye Hospital. London: H. K. Lewis. 1896. Pp. 47. Price 2*s*.—This little work by a competent ophthalmic surgeon deals with the chief forms of ophthalmic trouble that are met with in practice and will prove useful to any practitioner who has not had, or has not taken advantage of, opportunities of observing cases of disease of the eye in a special or general hospital. Although it is probable that there are now few or none who are unaware of the danger of using atropine in glaucoma and of its value as a remedial agent in iritis, yet it is well that all who have occasion to refer to a work on ophthalmic medicine should find, as they will find here, such facts strongly insisted on. The chief points to which the practitioner should turn his attention in the ordinary cases met with in the daily routine of practice are very briefly but correctly given. Mr. Doyne is so good an ophthalmic surgeon and the notes are so brief that in making any criticism of the book it is rather a question of what is omitted than what is given, but under the heading of phlyctenular ophthalmia we might suggest that a drop or two of a solution of cocaine allowed to fall into the inner angle of the eye will often save much screaming on the part of the child and enable an examination to be made without any forcible attempt to separate the lids—which indeed often fails. Cataract, again, might have been treated a little more fully. We should have thought also that the subject of lacrymal abscess might have been noticed, as it is often mistaken for erysipelas. The book would be more useful if it were increased in size.

Raid and Reform: By a Pretoria Prisoner. With Two Essays on the Antiquity of Man in South Africa. By ALFRED P. HILLIER, B.A., M.D., C.M. Edin. London: Macmillan and Co. New York: The Macmillan Company. 1898. Pp. 156. Price 6*s*.—Dr. Hillier has accomplished the feat of writing a very interesting book which, strange to say, appeals with almost equal force to the political agitator and the archæologist. His intimate knowledge of the modern part of his subject may be inferred from the facts that in addition to being a member of the Reform Committee in Johannesburg he has lived about sixteen years in South Africa, has been a vice-president of the Transvaal Medical Society, and in the course of his medical practice was at one time in partnership with Dr. L. S. Jameson (vide p. 100). Although strongly opposed to the policy of the Boer Government his language is studiously moderate and the case for the "reformers" appears to be very ably presented by him. His chief complaint against the House of Commons Select Committee of Inquiry is that Mr. Schreiner (Boer partisan) was heard in "no less than four sittings," whereas Mr. Charles Leonard (reform partisan) was confined "to less than a single sitting." As it is not probable that there will be political harmony in the South African Republic during the present generation Dr. Hillier's book deserves the attention of all who are interested in the state of parties in that country. In the chapters on the Antiquity of Man in South Africa he gives some account of numerous discoveries of stone implements resembling those found in the valley of the Somme in France.

Spinal Caries (Spondylitis or Pott's Disease of the Spinal Column). By NOBLE SMITH, F.R.C.S. Edin., L.R.C.P. Lond., Surgeon to the City Orthopædic Hospital. Second edition. London: Smith, Elder, and Co. 1897. Price 5*s*.—This book gives a very practical account of the treatment of spinal caries chiefly based on Mr. Noble Smith's own experience. It is copiously illustrated and should prove of use to those who wish to know more of the treatment of this condition than is to be found in the ordinary text-books of surgery. In this edition a few changes have been made, the chief of which is the description of a form of headpiece intended to replace the jury mast and sling in the treatment of caries of the cervical region of the spine. It consists of a band, metallic behind and flexible in front, encircling the cranium at the level of the forehead and the occiput; this band is attached by a metal stem to a dorsal support. A very interesting chart faces page 38; it illustrates the beneficial effect on the temperature which may result from careful fixation of the spine. A short note is given in an appendix on the Calot treatment of spinal caries by forcible reduction. Mr. Noble Smith does not venture to express any decided opinion on its value.

A Surgical Handbook for the Use of Students, Practitioners, House Surgeons, and Dressers. By FRANCIS M. CAIRD, M.B., F.R.C.S. Edin., and CHARLES W. CATHCART, M.B. Edin., F.R.C.S. Eng. and Edin., Assistant Surgeons to the Royal Infirmary, Edinburgh. With very numerous Illustrations. London: Charles Griffin and Company,

Limited. 1897. Pp. xv. and 321. Price 8*s.* 6*d.*—Caird and Cathcart's "Surgical Handbook" is so well known that the appearance of this new edition only requires us to say that it is as good as it has ever been. We know no book which will be of more value to a house surgeon or a dresser than this. It will teach him many things which he will want to know in his practical work and yet will not succeed in finding even after a prolonged searching of many other works. The new edition has been very carefully revised and though twenty-eight new diagrams and many new matters have been introduced, yet by omitting several of the old diagrams and reducing the size of others it has been found possible to limit the work to a size convenient for the pocket. The strong leather binding is very suitable for a book which is intended to be much used.

The Religio Medici and other Essays. By Sir THOMAS BROWNE. Edited by D. LLOYD ROBERTS, M.D. St. And., F.R.C.P. Lond. London: Smith, Elder, and Co. 1898. Price 3*s.* 6*d.*—Dr. Lloyd Roberts has added one more to the many editions of that *aureus libellus* the "Religio Medici" and we can only say that his introduction and editing are in every way worthy of the subject. The other essays in the book are "Christian Morals," "A Letter to a Friend," the little tract on "Dreams" and the "Hydriotaphia." To our minds this last, though not the most popular and one of the least known works of Browne, is an absolutely flawless gem. Both Carlyle and De Quincey esteemed it highly. There are passages in it which no one with an ear for music can fail to be impressed by. Take the following: "But who knows the fate of his bones or how often he is to be buried? Who hath the oracle of his ashes or whither they are to be scattered?" Or this: "Time which antiquates antiquities and hath an art to make dust of all things hath yet spared these minor monuments." Browne's English with its solemnity and dignity is like the organ music of Bach, always melodious but yet complex while seeming most simple. The printing and binding are worthy both of the author and the publishing house which is responsible for the issue.

The Tragedy of the Korosko. By A. CONAN DOYLE, M.D. Edin. London: Smith, Elder, and Co. Price 6*s.*—Dr. Doyle's new story is a good one and, what is more, well written. The plot is exciting and by no means, as exciting plots often are, impossible. The characters are well drawn and all of them natural and the only blemish that we can find in the story is the burlesque episode of the colonel and his hair dye, which seems to us to be out of place. However, even great-minded men have their little weaknesses and perhaps the mention of them in this case makes the colonel all the more real.

JOURNALS AND REVIEWS.

The *Quarterly Journal of Microscopical Science.* Edited by E. RAY LANKESTER, M.A., LL.D., F.R.S., ADAM SEDGWICK, M.A., F.R.S. and W. F. R. WELDON, M.A., F.R.S. London: J. & A. Churchill. 1898. New Series, No. 160. Price 10*s.*—This part contains (1) materials for a Monograph of the Ascons, a group of calcareous sponges of very primitive type. The article deals with the mode in which the investigation was conducted and gives an account of the origin and growth of the triradiati and quadriradiati spicules in the family Clathrinidæ, by E. A. Minchin, M.A., with five plates. It is shown that the spicules are formed by cells. (2) The Early Development of Amphioxus, by E. W. MacBride, M.A., with three plates—a valuable contribution to what has been already worked out by Kowalewsky, Hatschek, Lankester, and Willey, and by Lwoff. MacBride's specimens were preserved in osmic acid. 3. On Drepanidotænia Nemignathi, a new Species of Tapeworm, with one plate, by Arthur E. Shipley. This tapeworm was procured from the intestine of the bird named Hemignathus Procerus. 4. Spengelia, a new Genus of Enteropneusta, by Arthur Willey, D.Sc. 5. On a Prorhynchid Turbellarian from Deep Wells in New Zealand, by William A. Haswell, M.A., D.Sc., F.R.S., with a plate. Lastly, Professor Lankester has a note on the Development of the Atrial Chamber in Amphioxus.

The British Dental Journal.—This is a new monthly publication and aims, according to the introduction, "to bring into line dental surgery with medicine and surgery, to endeavour to extinguish the 'quack' and 'advertiser,' and to provide a reliable record of everything useful to the dental practitioner." The first issue consists of twelve pages of readable matter more or less interesting. There are editorial articles on Dental Representation on the General Medical Council and Unqualified Dental Practitioners.

Birmingham Medical Review.—The three original communications are very good ones. In a paper on the Nature and Prevention of Puerperal Fever Dr. Thomas Wilson describes the use of antiseptics in the lying-in room both for the genital region of the patient and the hands of the medical attendant. Mr. Christopher Martin gives details of the removal of a large pedunculated accessory lobe of the liver together with the gall-bladder. The operation was performed on Nov. 4th, 1896, the patient recovered quickly, and on Jan. 25th, 1898, reported herself as being in fairly good health. The illustration showing the tumour is a fine example of the new process of photo-trichromatic printing.

In the *Phonographic Record* for February Dr. E. S. Reynolds narrates a series of cases of Curious Aortic Aneurysms, each of which illustrates the protean characters which the signs and symptoms of aortic aneurysm often assume; Dr. Donkin has a lecture on an unusual case of Hemiplegia and Hæmi-anæsthesia in a man aged forty-six years; there is an obituary notice of the late Dr. Foster, of Bradford, who as a student took verbatim notes which were utilised when the lectures of the surgical professor were issued to the profession; a note on Unconscious Reporting is given; and we are told that Sir Wm. Thomson, of Dublin, is preparing a monograph on Some Diseases of the Rectum, to be issued in shorthand as the second volume of the Medical Phonographic Library.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Feb. 3rd, Dr. Sinclair White, F.R.C.S. Eng., President, being in the chair.—Mr. Snell showed recent specimens mounted in formol (Priestley Smith's method) of three instances of Sarcoma of the Choroid—one being a leuco-sarcoma—and Glioma of the Retina. Photographs of Fibroma of the Upper Eyelid were shown with stereoscopes, together with microscopic slides of the sarcomata.—Mr. Archibald Cuff showed a boy who had fallen on a broken bottle in June, 1897, opening the left elbow-joint from side to side, cutting off the olecranon process and severing the ulnar nerve. The treatment consisted in thoroughly cleansing the parts, suturing the bone ends with chromic catgut, periosteal sutures, and suturing the cut ulnar nerve. The wound, which was an extensive one, healed by primary union. There is now perfect movement, the bony fragments are united by bone, and there is almost complete return of the function of the cut nerve. Mr. Cuff also showed a case of Circular Ulcer of the Leg of seventeen years' standing now perfectly healed. The treatment consisted in ligation of the saphenous vein, cleansing of the ulcer, and the application of lead plates to its surface.—A discussion on Efficient Vaccination was introduced by Mr. Dale James and Mr. William Skinner.—The President, Mr. Kilham, Mr. Longbottom, Mr. Snell, Dr. Leonard Giles, Mr. Gale, Dr. Richards, and Dr. Keeling made remarks.

Analytical Records
FROM
THE LANCET LABORATORY.

(1) BETUL-OL; (2) COLCHI-SAL; AND (3) CHINOSOL SANITARY TABLETS.

(B. KÜHN, 36, ST. MARY-AT-HILL, E.C.)

BETUL-OL is a compound liniment of methyl salicylate, the predominating constituent of oil of wintergreen. The oil possesses the peculiar fragrant odour of the natural oil and it is suggested is useful as a local application in the administration of salicylates by the channel of the skin. In this way it is said to have been used in the treatment of rheumatism and gout with results which merit the method being tried on a wider scale. That the application of oil of wintergreen in this way leads to absorption of salicylic acid is evident from the results of an examination of the urine. Colchi-sal capsules contain oil of wintergreen in which has been dissolved colchicine—a well-known specific, of course, in acute gout. Each capsule contains 20 centigrammes of natural methyl salicylate derived from *betula lenta* and $\frac{1}{240}$th grain of colchicine. It is obvious that in both of the foregoing preparations the advantages of the natural salicyl compounds are secured, advantages which, as is well known, are of considerable physiological importance. Chinosol is now established as one of the best and most convenient disinfectants, antiseptics, and deodorants, since while it exerts, as Dr. Klein has shown, a very powerful germicidal action, it is non-poisonous and is easily soluble in water. It is now prepared in the convenient form of "sanitary tablets" which, by being dissolved in known volumes of water, will produce solutions of standard strength.

"PURO" BEEF JUICE.

(AGENTS, T. CHRISTY AND CO., 25, LIME STREET, E.C.)

The merits of this preparation as a powerful nutrient are at once evident when the results of our analysis are considered. The analysis was as follows: moisture, 42·52 per cent.; organic matter, 47·48 per cent.; and mineral matters 10 per cent. The organic matters were found to be composed as follows: beef albumin, 21·37 per cent.; peptone-3·36 per cent.; and extractives soluble in alcohol, 22·75 per cent. Thus the albumin amounts to no less than 21·37 per cent, which together with 3·36 per cent. peptones forms almost exactly one-half of the organic beef constituents present. The fluid exhibits the characteristic spectrum of hæmoglobin and the albumin on boiling separates in abundant flocks, which, as we have found, are very readily digested by pepsin solution. The taste is not unpleasant and is free from excess of salt. The juice should prove, according to the above results, of real service to those requiring a powerful because easily assimilated food.

SCOTT'S EMULSION.

(SCOTT AND BOWNE, LIMITED, 95, GREAT SAFFRON-HILL, E.C.)

The value of the hypophosphites combined with cod-liver oil, especially in wasting diseases and in debilitated conditions, is well known. In addition to these constituents the above preparation contains also glycerine, which is well recognised as assisting very materially in the absorption of oils and fats. We have examined the preparation with care and find that it fulfils all the requirements and presents all the conditions of a very satisfactory emulsion. In appearance and consistence it is not unlike cream and under the microscope the fat globules are seen to be of perfectly regular size and uniformly distributed. In fact, the preparation microscopically examined presents the appearance of cream. So well has the oil been emulsified that even when shaken with water the fat is slow to separate, the liquid then looking like milk. The taste is decidedly unobjectionable and is pleasantly aromatic and saline. We had no difficulty in recognising the presence of the hypophosphites in an unimpaired state. The emulsion keeps well even when exposed to wide changes of temperature. Under the circumstances just described the emulsion should prove an excellent food as well as a tonic.

WORTH'S PERFECT FOOD.

(WORTH'S FOOD WORKS, CHELTENHAM.)

This is a cereal food containing a very high proportion of soluble carbohydrates, a result which is to be attributed to malting and to careful cooking. It contains a very satisfactory proportion of nitrogenous matters, amounting to one-sixth of the dry preparation. The mineral matter amounted to 0·71 per cent. and contained a desirable proportion of soluble phosphates. The cereal food presents a composition satisfactory alike in the amount and nature of carbohydrate, nitrogenous, and fatty constituents.

VIBRONA.

(FLETCHER, FLETCHER AND CO., 469, HOLLOWAY-ROAD, N.)

Vibrona is a standard preparation and consists of a delicate, pleasant-tasting red wine containing an exact and constant quantity of the principles of cinchona bark. Moreover, these principles are presented in such a form as to obviate the distressing results frequently following the administration of ordinary cinchona extracts well known as cinchonism. This result is secured by combining the cinchona principles with bromine. Our analysis of the sample submitted to us confirms the claims made in its favour and in regard to its composition. The analysis was as follows: alcohol, by weight 18·46 per cent., by volume 22·64 per cent., equal to proof spirit 39·68 per cent.; and mineral matter, 0·26 per cent. The total alkaloidal constituents amount to nearly a quarter of a grain in two fluid ounces. The wine is stated to be examined at intervals with the view of maintaining its standard of strength. It is slightly but agreeably bitter to the taste. The wine was perfectly sound and free from sediment. As the above results indicate the wine is clearly a tonic preparation of a superior character. An interesting description of Vibrona, as well as other preparations, including a champagne, appears in a very neat and artistic *brochure* which has been drawn up and printed "for private circulation" by the above firm.

TURTLE SOUP.

(T. K. BELLIS, 6, JEFFREY SQUARE, ST. MARY-AXE, E.C.)

Turtle soup is notoriously nutritious and has the advantage of a pleasing, delicate flavour. Its properties as a valuable nutrient are undoubtedly due to the easily assimilable form in which the nitrogenous and gelatinous constituents exist in the flesh of the turtle. The expense of turtle soup somewhat militates against its use, especially for invalids, but in the present instance we find clear turtle soup containing some slices of the turtle flesh conveniently put up either in glass jars or in tins at the comparatively moderate price of 5*s*. Two pint tins added to a quart of good home-made clear stock are said to make sufficient soup for twelve persons. We have very carefully examined the preparations submitted to us, but we could find no cause for reproach on any point. Thus in the specimen enclosed in the glass jar we found no preservatives, while in the tinned specimen we could obtain no evidence of injurious metal being present in the soup or of the slightest corrosion of the tin. The soups are excellent in flavour, with a delicacy which must satisfy the *gourmet*, but, what is of more importance, which should appeal to the sensitive palate of invalids. The soups proved to be in sound condition. It is evident that great care is taken in the selection, conveyance, and treatmen

of the turtle, which under these conditions alone could produce such an excellent soup.

VICTOR LIQUID COFFEE.

(THE DUKE'S PATENTS COMPANIES, 20, HIGH HOLBORN, W.C.)

Particular attention would appear to have been paid to the preparation of this extract whereby the full aromatic flavour of the freshly-roasted berry is retained. At any rate, the flavour of the coffee prepared with this extract is certainly superior to that of several preparations which we have tried. The genuineness of the preparation is attested, too, by the fact that it yields on suitable treatment nearly 0·8 per cent. of the alkaloid caffeine. Coffee in a large measure owes its stimulating property to this crystalline constituent. The amount in the extract is satisfactory, since on adding two teaspoonfuls to a breakfastcupful of boiling water the strength of the infusion in regard to caffeine is practically identical with an infusion of ordinary coffee made by using two ounces of the crushed berry to half a pint of boiling water. The aromatic oils of the roasted berry are, however, necessarily absent.

New Inventions.

A MEANS OF PASSING STRAIGHT INSTRUMENTS INTO THE BLADDER IN PROSTATIC ENLARGEMENT.

THE illustration shows the urethrometer made for me many years ago by Messrs. Arnold and Sons, now adapted to another use—viz., the diagnosis of some prostatic obstructions not determinable by rectal touch, especially that antero-posterior narrowing caused by a middle lobe, often valvular in shape and often better treated when diagnosis can be arrived at by less heroic means than those so much in vogue at present. A simple means enables me to pass the straight urethrometer (4) into the bladder, which by its expansion (3) diagnoses automatically prostatic encroachments; (1) is a rubber catheter split spirally (or straight) to, and at its extreme tip which pulled over the stem of the instrument hangs from its end at (2). This glides easily into the bladder carrying the urethrometer with it. When there one hand catches the catheter at (4) and withdraws it, leaving the urethrometer in the bladder. This is then withdrawn with its scale vertical and will show automatically the presence and degree of encroachment. I may say to slit a catheter thus is to afford an easy way of cleaning it. The above means might also prove useful when prostatic irregularities render the passing of calculus sounds difficult.

Finsbury-pavement, E.C. JAMES MAC MUNN.

FORCEPS FOR NASO-PHARYNGEAL ADENOIDS.

OF the various modifications which have been effected in the shape of the post-nasal forceps originally made by Löwenberg I think the one designed by Juraśz has not met with the attention it deserves. In this form the extent of the cutting surface and the size of the fenestræ allow of large portions of the growth being grasped, so that very few introductions of the instrument are required. I venture to think that in common with most forceps used in the removal of these growths those of Juraśz are unnecessarily large, long, and heavy. In the pair which Messrs. Mayer

and Meltzer have made for me the instrument only weighs one ounce instead of three and a half ounces, and in a straight line it measures six inches instead of ten and a half inches. The hinge is of a different construction, allowing the instrument to be easily taken to pieces to be purified, and at the same time so arranged as to diminish any risk of the uvula being caught in the joint. The slighter build leaves more room for the index finger to be manipulated along with the forceps in the post-nasal space, while the shorter handles give more power. I have found this six-inch pair sufficiently large for patients up to sixteen years of age. The forceps have also been made with straight handles, as in Ruault's modifications, for those who may prefer this form.

ST CLAIR THOMSON, M.D. Lond., F.R.C.S. Eng.

Queen Anne-street, W.

"THE ADJUSTABLE PAD TRUSS"

THIS truss, devised by Mr. Draper, of York, consists of a light, softly covered body spring and a small, light, flexible hernia pad; no under-strap is necessary. The special feature of the truss is that the hernia pad is so fixed to the body spring that by a simple mechanical contrivance the obliquity of the pad may easily be altered and refixed either by the patient himself or by his medical attendant; thus the annoyance of having frequently to send a truss to the makers for alteration is altogether avoided—a matter of no small importance with fidgetty patients. The truss is made by Messrs. Maw and Son, of Aldersgate-street, in various qualities and at moderate prices.

TAUNTON AND SOMERSET HOSPITAL.—The annual meeting of the Taunton and Somerset Hospital was held on Feb. 10th under the presidency of the Hon. E. W. B. Portman. The report showed that the income was less by £387 than in 1896 and a loss of £624 had arisen on the year's working. This deficit, added to the adverse balance previously brought forward, made the present deficit on the general account amount to £1275. The accounts of the Nursing Institute showed a surplus of £119.

BRIDPORT DISPENSARY AND COTTAGE HOSPITAL.—The annual meeting of this institution was held on Jan. 31st under the presidency of the mayor. The report showed that during 1897 there were 257 cases treated at the dispensary as compared with 263 in 1896. 50 in-patients had been admitted into the hospital and 12 patients were sent to the convalescent branch at West Bay. The financial statement showed that the ordinary income during the year amounted to £815 and the expenditure to £803. The income of the convalescent branch was £39 and the expenditure £21. A bequest of £500 had been received from the late Mrs. Chick.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 26, 1898.

THE discussion which has occupied the last three meetings of the Royal Medical and Chirurgical Society has been of psychological interest rather than of surgical value. The subject—the Operative Treatment of Cancer of the Breast—is one that interests all surgeons and upon which every operating surgeon must of necessity acquire experience. But it cannot be said that the science or the art of surgery has been in any way advanced by the discussion although several eminent and experienced surgeons have contributed to it from the stores of their experience. The discussion was initiated by a paper in which a series of cases collected from many sources were tabulated and briefly discussed. These cases were in the strictest sense of the word selected, chosen to demonstrate two facts. In one table were ranged cases in which patients had lived for long years after an operation for cancer of the breast without any obvious return of the disease. In the other table a larger series of cases was presented in which the disease had reappeared only after long periods of freedom from all signs of cancer. The existence of such cases has long been well known to all surgeons and practitioners of medicine, but none the less Mr. SHEILD has done well to present us with a number of well-ascertained facts. As all other cases of cancer of the breast were rigidly excluded from his paper it is clear that its value was limited within certain lines and that any attempt to base wide generalisations upon a series of isolated and selected facts would be as unwise as to attempt to support a pyramid on its apex.

It must strike every reader of this discussion, which has been reported from week to week in our columns, that the one subject that found almost no place in the speeches is the natural course of the disease, and when the matter was referred to it was only too often to make a dogmatic statement which a wide survey of the facts would not wholly support. We have been watching this dread disease for generations and yet how little we know of it! Not only is its intimate nature—its *vera causa*—still concealed from us, but all the laws which govern its progress and development are entirely unknown. Medical men sometimes speak as if this disease pursued a definite course and as if the future of any case could be more or less accurately foretold. And yet the longer a man's experience the more reason he has to know that this is a groundless assumption and that of no disease is exact prognosis not only more difficult but more impossible. It is a very elementary proposition that a knowledge of the natural history of a disease, and not only of isolated facts in its morbid anatomy and clinical etiology, must precede any definite conclusions as to therapeutical results; yet this aspect of the subject was hardly referred to or briefly dismissed by most of the speakers. A great deal was said as to VOLKMANN'S dictum that patients who remain free from disease for three years after operation may be classed as "cured," and, strangely enough, it received most support from the adherents of the more extended operative interference. In spite of the very great variation met with in the development of cancer of the breast we can safely assert that the local and lymphatic secondary deposits occur in a centrifugal direction—that is to say, the earlier of either series are those nearer the primary growth, the later those further from it. For example, the cervical glands show signs of disease after and not before the axillary glands. From this it necessarily follows that the more limited the operation performed the shorter the period of freedom from disease that may be regarded as an indication of "cure." A time—three years—which conceivably may have been roughly accurate for VOLKMANN'S cases is obviously too short for cases submitted to the HEIDENHAIN-STILES operation, and yet the advocates of the latter procedure are quite content to apply VOLKMANN'S rule to their cases. Apart, however, from this obvious fallacy the discussion showed clearly that the so-called rule is no rule at all if language is to have either its common or its technical meaning, and we may hope that it will soon disappear from contemporary medical literature. Mr. SHEILD'S second table ought to be the death-blow to a dictum that would not have survived until now if it had not been associated with the great reputation of its originator.

The discussion turned largely upon the relative merits of the "old" and the "new" operation. Mr. SHEILD'S paper, in accordance with its definite limitations, threw no broad light on this question and we do not think that such facts as were adduced by the various speakers could have seriously influenced the opinion of anyone present. The value of the statements made was largely affected by the uncertainty attaching to the words used. Let it be granted that the "old" operation is, anatomically considered, the incomplete removal of the breast and its primary lymphatic area, it may yet be a complete removal of the whole infected area and therefore a satisfactory therapeutic measure. The "new" operation is theoretically the complete removal of the gland and of its primary lymphatic area, yet it may not only be an unnecessarily extended operation but it may fail either because it falls short of a removal of the whole infected area or because of error in its execution. Its success in the properly selected cases must depend upon each stroke of a knife in an operation that lasts an hour or more. Who can assert that not once has his knife transgressed the limits he has mentally laid down for it. Certain extensive operations that have been sometimes advocated were generally condemned by the speakers, as were also such operations as even the older surgeons would call "partial." There was a general consensus of opinion that not only should the entire mamma be removed but also the fascia over the pectoral muscle and the entire lymphatic and fatty contents of the axilla. While some were in favour of removal of the greater pectoral muscle as a routine measure, the majority

of the speakers only adopted that precaution in certain more grave cases. All concurred in advising resort to operation at the earliest possible time, and short of severe mutilating procedures the more widely the parts were removed the more hopeful was held to be the outlook. This is a very general statement and, like all others made in connexion with cancer, is one requiring serious qualification in individual cases. The time has not yet arrived for dogmatic assertion and probably not until the secrets of the pathology of this dread disease as distinguished from its morbid anatomy have been laid bare shall we be able to speak with any real certainty of its therapeutics or to approach the treatment of any given case with a full and well-grounded confidence in our ability to treat it successfully. But Mr. SHEILD has done good service by bringing up the subject for discussion.

One word more must be added as to this lengthy debate. It was curious to notice how the same word would be made to bear a different meaning by different speakers. Even our old friend "cure" was held to signify freedom from manifest disease or proved freedom from actual and potential disease. "Immunity" by one speaker was used in its technical sense, but as this was inconvenient to another speaker he preferred to employ it in its "plain English sense," as if that had any bearing at all upon its use in a scientific discussion. Disease was spoken of as "latent," although the speaker was unaware whether it was really hidden away or non-existent. Looseness of thought is never far removed from such looseness of language.

AN important paper was read at the Imperial Institute on Feb. 17th by Mr. H. M. BIRDWOOD, C.S.I., Member of Council of the Bombay Government, on the Visitation of Plague in Bombay. The paper was addressed to the Indian Section of the Society of Arts and it dealt essentially with the circumstances under which plague had commenced and spread in Bombay during the 1896-97 epidemic and with the measures of prevention that were adopted. Mr. BIRDWOOD had with much care prepared a very complete story of plague both in the past and as affecting Bombay; he entered into details as to its bacteriological aspects, and he discussed its etiology and the question of its prevention by means of prophylactic inoculation. The discussion which followed admitted to the full all that could and, indeed, ought to be said in praise of the individual efforts which were made to stop the progress of the disease in Bombay, and amongst those deserving such praise it was the unanimous feeling of a crowded meeting that to Mr. and Mrs. BIRDWOOD the plague-stricken in Bombay owe a deep debt of gratitude. But on some points there was evidently a difference of opinion, and the subject that came mainly under discussion related to the action taken by the administration of Bombay both as regards the conditions which have permitted plague to find so favourable a soil for its diffusion and propagation and as to the system under which the preventive measures were inaugurated and superintended.

Sir RICHARD THORNE in opening the discussion gave full expression to the gratitude which the country owes to those who at much self-sacrifice undertook the work of prevention, but he drew attention to the fact that efforts which had been aptly described as well-nigh superhuman had not prevented the epidemic of 1896-97 from being followed by that of 1897-98, through which Bombay is now passing, and which is, if anything, even more serious and fatal than the previous one. Some explanation of this seemed called for, and, disclaiming all personal knowledge of Bombay, he quoted from the statement which Surgeon-General CLEGHORN laid before the Venice Conference in his capacity as Anglo-Indian representative, demonstrating that there is but little difficulty in assuming that owing to former errors in administration Bombay presents precisely the conditions under which plague is known to spread. Mr. BIRDWOOD had aptly quoted an eminent Indian medical authority to the effect that the "all-important factors to be remembered" were the filthy and insanitary "chawls" which are inhabited by 70 per cent. of the population of Bombay, and recalling the terms of Surgeon-General CLEGHORN'S report Sir RICHARD THORNE gave the following summary account of these chawls. They are mostly great tenement buildings, many of them from five to seven storeys high, built on the flat system. Through the length of each flat runs a corridor, the interior of which is dark and unventilated, in which are situated latrines and out of which open on either side the doors of the numerous tenements. The rooms are about 8 ft. by 12 ft. in area, and each one is generally occupied by from six to eight persons or even more. So crowded are these chawls on any given area that window openings in respective blocks look one into another; they are therefore commonly kept covered, and apart even from this the rooms are so dark that, according to Surgeon-General CLEGHORN artificial light had to be used in them by day. Between two rows of chawls is a species of back passage into which the inhabitants throw filth from the floors of the chawls—each of which is referred to as often containing from 500 to 1200 inhabitants; and these passages, it is added, are rarely scavenged. It is also pointed out that these chawls were erected to meet the demands of the cotton industry, and hence they are the outcome not of native ignorance but of Western civilisation so-called. Surgeon-General CLEGHORN further added that the overcrowding due to these chawls is three times worse than anything that could be found in London, and his astonishment was, not that plague had become epidemic in Bombay, but that the disease had not carried away half the population.

On this Sir RICHARD THORNE recalled the fact that the influence of soil in its widest sense was one of the first considerations to be held in view as regards a filth disease such as plague, and he pointed out that on Mr. BIRDWOOD'S own showing these chawls afforded precisely the soil needed for the maintenance of the epidemic. Even ordinary garden soil teems with micro-organic life and pathogenic organisms find in soil a favourable medium for life and multiplication. One point only did he appear in any way to criticise in Mr. BIRDWOOD'S paper—namely, his assertion that anxiety must remain "unless science ..... can suggest some effective means of eradicating the plague bacillus." As to this he contended that there were times when the appeal should

be to practice rather than to science, and that so long as the chawls of Bombay remained what they are it was of no use to call upon experts or to wait for advances in science. Although it is doubtless a mistake to believe that the great fire of London freed this metropolis from its plague, yet, if medical considerations were alone in question, the destruction by fire of the chawls of Bombay would, he insisted, in the long run end in gain. So, also, as regards the eradication of the plague bacillus, this is not what is wanted; it is rather the removal of conditions which enable an accidentally imported specific organism to multiply and spread. Action on this principle has all along been our English practice. We are prepared to receive any number of vessels from western ports of India; we never propose to quarantine them lest they should carry plague bacilli; but we aim at receiving those vessels under conditions which are inimical to foreign pathogenic organisms.

Dr. SIMPSON, late medical officer of health of Calcutta, also bore testimony to the splendid work of individuals in attempting to control plague, but he found fault with the heads of administration as to their methods. Thus he stated that the only medical member of the Bombay Plague Committee was not even required to give his whole time to those duties and that he was engaged in obstetric work in a Bombay hospital. This circumstance recalls the fact that at present the chairman of the Plague Committee is a distinguished service military officer who was announced to the meeting as having gained great credit in the Chitral expedition. It seems strange to us in England to put a military expert at the head of such essentially medical work, especially when the Indian Medical Service contains so many who are fully capable of undertaking the duty of supervising the control of disease. Another interesting speaker was Mr. H. H. ACKWORTH, formerly Municipal Commissioner in Bombay, who first announced that he was personally responsible for the construction of many of the chawls, but then added that when the municipality of Bombay prepared by-laws so as to secure open space about future dwellings the Bombay Government actually inserted a clause which prevented their application to areas already built on. This is as much as to say that the by-laws were to apply where at present there is no need of them and that they were not to apply where they are urgently and immediately called for.

The paper and the discussion cannot fail to be of use in indicating the lines on which future action should be taken, and we feel sure that the head of the Bombay Administration, in face of the "appalling perplexities" of his high position, will, whilst continuing to commend those public-spirited men and women who with a devotion which is beyond all praise have faced the epidemic with unwavering steadiness, also give heed to the warnings which are conveyed in the mere descriptions of Indian officials and others as to the Bombay chawls. So long as these remain undealt with so long will Bombay contain within its very midst conditions which tend to the promotion of epidemic disease of one and another sort. These crowded localities contain within themselves and in the soil on which they are massed the very conditions which science has for long taught to be identified with the spread of filth diseases. Mr. BIRDWOOD gave hope of a "new Bombay." May his hope be realised without unavoidable delay.

AT the late Gloucester Assizes ALBERT GRIFFITHS, of Bristol, aged seventeen years, was tried and convicted of the crime of wilful murder. The facts are briefly as follows. The victim of the tragedy, JAMES RICKETTS, a farmer, residing at Wick, was previously unknown to the culprit. On Jan. 17th, 1898, he went to Bristol and on his way home stayed to dine at Kingswood as was his custom. The prisoner was also at the inn. From the evidence it appears that RICKETTS gave GRIFFITHS a lift in his cart. At seven the same evening the former was found on the road dying from stabs in the chest. On Jan. 25th GRIFFITHS surrendered voluntarily to the police at Birmingham and confessed the crime. Before leaving Bristol on the day after the murder he pawned his coat which, when recovered, contained an American clasp knife, a sham moustache, a disguise for the nose, and a substance used for blacking faces. On the knife was a stain of blood.

The instrument, however, with which the injuries were inflicted was a butcher's knife belonging to the prisoner's father. This was found on the road covered with blood. It was alleged by the prosecution that robbery was the motive for the crime. No doubt the prisoner knew that the deceased was possessed of money; but on the other hand there was no proof that any was stolen. Indeed, it seems probable that such was not the case, otherwise there would not have been the necessity to resort to the shift of pawning the coat for 5*s*. The defence was based on the presumption of insanity at the time of the murder. It is important whilst discussing the probabilities to consider the antecedents of the prisoner. As regards his family history we have the testimony that a maternal uncle died in an asylum and that a paternal great-aunt was twice confined in one. Personally he bore a good character and up to a recent period had been affectionate to his relatives. Then he became moody and morose and was given to fits of crying. Two years ago he suffered from ruptured kidney and a witness said: "One boy went into the hospital and another went out." A few months before the murder he sustained a blow on the head with a cricket-ball. Counsel for the defence argued that the deed was the result of a homicidal impulse which the prisoner was unable to restrain. Mr. Justice DAY, who tried the case, refused to allow the medical witness for the defence, Dr. LIONEL WEATHERLY, of Bailbrook House Asylum, to be interrogated as to his opinion of the state of the prisoner's mind at the time of the murder from his knowledge of the history of the crime and the history of the criminal. He stoutly adhered to the crystallised principle of the law—viz., that successfully to maintain the theory of insanity it must be shown that prisoner was unable to appreciate the quality and nature of the act and to be unable to distinguish right from wrong. Inasmuch as the prisoner had not evinced symptoms of insanity since his surrender there was no possibility of proving what the statute required. As the law at present stands the issue of the trial was—the facts not being disputed—a foregone conclusion. The prisoner by his counsel was not allowed to plead

impulsive insanity. On strict legal grounds we are unable to oppose the course taken by the judge, but we certainly join issue with his Lordship when he states his views of the nature of mental disorders. "Irresistible impulses as they are called were often merely the result of unrestrained passions," said Mr. Justice DAY in his summing up. Just so; but the essential point in the argument—viz., whether the impulses were unrestrainable—seems to have been unaccountably ignored. In his nomenclature there would be nothing between complete intellectual insanity and sheer wickedness, a presentment we hold inconsistent with the dictates of common sense, not to speak of its being at direct variance with the teachings of science. Nor can we dismiss this aspect of the case without expressing our regret that his Lordship thought fit to traverse the theory that the prisoner had betrayed premonitory symptoms of insanity. Insanity or "disease of the mind," according to his view, is one and indivisible, beginning and ending in itself. Nor did he accept material injury to the nervous system as a cause of insanity. He thought "the ruptured kidney had nothing to do with the case and probably every boy had been struck by a cricket-ball." His Lordship's refusal to entertain the precepts of medicine which undoubtedly were strong in advocacy for the unhappy youth was in marked contrast to his deliverances as a fellow Christian and a fellow man. We are glad to see that the recommendation to mercy, a recommendation founded on the youth of the prisoner, has been acted upon and thas the unhappy lad's life has been spared, but we hope that in addition to this the authorities will take heed that his mental condition is not aggravated by the ordinary prison discipline, a discipline trying enough to well-balanced minds.

Annotations.

"Ne quid nimis."

THE GOVERNMENT AND THE NEW FOOD BILL.

THERE is reason for believing that considerable pressure is being brought upon the Government to introduce a satisfactory Bill this session providing for the suppression of the adulteration of food. We learn that a great number of petitions coming, oddly enough, from the country have been laid upon the table praying for an early amendment of the law. Mr. Kearley, who could not find any definite promise in the Queen's Speech that legislation in this direction would be proceeded with, made it the subject of an amendment. Mr. Chaplin confessed that he has been busily engaged in framing a satisfactory measure and so we may justly conclude that the useless measure introduced by him and Mr. Russell previously has been dropped. We are very glad of this and it justifies the very unfavourable view which we felt bound to take of the proposals embodied in this draft Bill in a leading article in THE LANCET of Jan. 8th, 1898. Mr. Balfour said that there was a statement in the Queen's Speech which amounted to an assurance that something would be done and therefore he was puzzled to know why such an amendment was proposed. In the end the amendment was defeated and it was practically the last of any importance before the Address from the throne was formally agreed to. It is curious that the petitions praying for early legislation in this matter should have come from the rural districts, but we think that the explanation probably is that home producers feel the unfair competition of imported adulterated articles very keenly. A satisfactorily amended measure is therefore doubly demanded, first in the interests of the health of the community and secondly in the interests of honest trading.

DEATH AND UNQUALIFIED PRACTICE.

IT is cruel in the law to allow unqualified men to pose as regular practitioners and go through all the forms of medical attendance and practice among the poor. The poor are deceived by such conduct and entrust their own lives and those of their children to such false practitioners often with fatal consequences. A case in point has just been investigated at Brightside. A boy, aged thirteen years, was taken ill and the mother had to stay at home to nurse him. She called in one Mr. J. Hope Allan, believing him to be qualified, who pronounced the patient to be suffering from rheumatism and charged sixpence. After the lapse of two precious days and on the advice of the unqualified attendant the poor-law medical man was called in—Dr. James A. Milne, assistant to Mr. Longbottom. He diagnosed double pneumonia and the boy died with a temperature of 108° F. an hour after Dr. Milne's visit. The diagnosis was confirmed by a post-mortem examination. This is an illustration of cheap fraudulent sixpenny medical practice which is a disgrace to our law and to our civilisation. The jury found a verdict in accordance with the evidence and added a rider "that they were of opinion that had the deceased been seen on the Saturday previous to death by a properly qualified medical man there was a possibility of saving life." We leave such a pitiable case to the reflection of our representatives in Parliament who are responsible for the present state of the law.

"HEREDITY IN RELATION TO LIFE ASSURANCE."

THERE are several most interesting points concerning heredity in relation to life assurance discussed in Dr. Hermann Weber's presidential address delivered to the Life Assurance Medical Officers' Association at the first meeting this year. He first points out that the non-appearance of disease in the different children must not be regarded as proof that they had not inherited any particular disease from their ancestors. Occupation, manner of living in general, or climatic influences may prevent the development of the disease in one generation and yet it may reappear with all virulence in the next. Dr. Weber proceeds to make some remarks on a kind of heredity which is not always taken sufficiently into consideration—the heredity of the duration of life. He divides people into three classes: (*a*) In the majority of families the average duration prevails; the greater number of members who reach adult life die between sixty and seventy-two years of age, unless some infectious diseases or other unfavourable circumstances produce an earlier death. This large division was not discussed. (*b*) Long-lived families. In a smaller proportion of families is found a tendency to very long lives—viz., from seventy-five to ninety years and more. Infectious diseases and other accidents sometimes likewise cut these lives short, but they frequently survive even these, while the possessors of average lives succumb to them. The latter, for instance, mostly die if they contract typhoid fever after the age of fifty-five or sixty years, while Dr. Weber has seen five cases of recovery from this disease in persons the ages of between sixty-two and sixty-eight years. These long-lived families are of great and profitable importance to insurance

companies. He thinks that insurance companies might sometimes allow lower than ordinary rates in such cases without loss to themselves. For instance, if there is no other cause against it Dr. Weber would accept cases of gout, inherited or acquired, at ordinary rates. (c) Short-life tendency. Almost all the members of this group die before attaining sixty years of age, some from recognised diseases and others from ill-defined conditions coming under the head of a general breakdown. This class is frequently as disastrous to insurance companies as the preceding is profitable. He gave some interesting examples of such family histories. Many exceptions occur in members of such short-lived families; but in order to take them as good lives, their personal history and condition must be good as well as the surrounding influences. Change of occupation and manner of living, change of abode, and still more change of country, exercise a powerful influence on the constitution. Dr. Weber then proceeded to discuss heredity under the heads of different classes of diseases generally regarded as inheritable, and many valuable hints were thrown out as to the amount to be added on certain lives, &c., in regard to which medical officers of life assurance offices have so much responsibility thrown upon them.

A ROYAL COMMISSION ON THE DISPOSAL OF SEWAGE.

THE Government have decided to appoint a Royal Commission to study the various methods for the disposal of town sewage. This matter has of late years become one of increasing importance because the Local Government Board on the one hand have insisted on some land treatment in addition to chemical and other methods of sewage treatment whilst, on the other hand, chemists and experts have declared this condition to be at times unnecessary; and some authorities have found it difficult, if not impossible, to secure the requisite amount of land. The Exeter system of microbic tanks is one of the most recent cases in which this point has been raised. Clearly, the whole matter has long needed careful inquiry, but no such inquiry has been undertaken by the Government since the date when nearly all the modern methods of sewage treatment have been advocated or adopted. So far as the constitution of this Commission is concerned no official intimation has been given, but we believe that a number of experts in different branches of science affecting the subject and some persons of administrative capacity have been communicated with, and that the composition of the Commission is practically, if not finally, settled.

OYSTERS AND TYPHOID FEVER.

THE Urban District Council of the little town of Brightlingsea in Essex, a town noted for its relaid foreign oysters, has lately waxed indignant because, as the Council alleges, certain accusations, unsupported by adequate evidence, have been brought against the local oysters by Dr. George Brown, the medical officer of health of Colchester. This officer reported that four patients suffering from enteric fever, who were living in different parts of Colchester, "had all eaten oysters brought from Brightlingsea, and the circumstances conspired to lead to the opinion that these oysters were the sole cause of the outbreak." It was also added that "the chain of evidence, moral and medical, is to my own mind conclusive that the sewage-soaked oysters of this little seaport were the factors at work in the production of the infection. I have communicated all the circumstances to the Local Government Board and as it is in their hands it is most likely that they will take measures to protect the public from any further outbreak." The Brightlingsea Urban District Council, anxious to be furnished with "the chain of evidence" referred to, wrote to the Local Government Board on the matter and were informed that "the only communication on the subject of which the Board are aware is a brief letter sent by Dr. Brown to the Board's inspector, Dr. Buchanan, on Nov. 27th, 1897, which contains a short statement as to four cases of typhoid fever, but no information as to any one of the Brightlingsea oyster beds or layings." On these alleged facts, as reported in the local press, the oyster merchants are indignant and they are aggrieved that their trade should suffer without sufficient evidence to warrant the accusation. We expect, however, that Dr. Brown is in possession of adequate evidence to support his contention, as we feel sure that he would not make an inference of this sort on insufficient data. In this question of water-borne enteric fever generalisations have, we regret to say, been made in certain cases which the facts seemed hardly to justify. That a person eats oysters and develops enteric fever is in itself no sufficient justification for associating the two facts together in the relation of cause and effect, but such deductions have, we are afraid, been sometimes made. Here, however, the circumstances are surely different if, as it is alleged, the oysters in question were procured from the Brightlingsea layings, against which there is the gravest suspicion; indeed, it was practically demonstrated by Dr. Bulstrode in his recent report that certain of the layings in Brightlingsea Creek were "in especial danger of sewage pollution," and we are not aware that any improvement in the state of affairs has as yet taken place. We have heard, too, that several cases of enteric fever have been suspected to have been caused by oysters procured from the Brightlingsea layings and that this has been the subject of an investigation by Dr. Buchanan, of the Local Government Board. If this be true, and a report is published on the subject, we may expect that whatever is the conclusion at which it arrives there will be a sufficient "chain of evidence" to support it. If the oyster merchants of Brightlingsea and certain other places are wise in their generation they will hasten to put their houses in order. Sufficient warning has been given and the public will soon demand that this unsatisfactory state of affairs be put an end to.

THE NIGER-SOUDAN CAMPAIGN.

NO apologies are needed for calling our readers' attention to Dr. R. Horace Castellote's Notes on the Campaign of 1896–97 concluded in the present number of THE LANCET. The late expeditionary medical officer to the Royal Niger Company has brought before our readers a variety of interesting information of a mixed character regarding the medical work of a brief but very successful campaign, the nature of the country traversed, and the operations that were carried out within sixty miles of the banks of the Middle and Upper Niger. The whole campaign consisted of three distinct expeditions, but Dr. Castellote's notes mostly deal with the march to Bida, the capital of the Foulah empire, the subjects of which are a powerful Mahommedan race who muster some 1500 horsemen and from 20,000 to 25,000 irregular fighting men on foot. The Niger Company's force consisted roughly of 600 native troops, 800 native carriers, and 32 Europeans. The equipment of the expedition seems to have been very carefully considered, the medical part of it in particular having been designed by Mr. W. H. Crosse, the principal medical officer of the company in London, whose experience and thorough knowledge of the country well qualified him for the work. The object was not only to provide everything absolutely necessary for the expedition, but to do this in the most portable, convenient, and accessible form. As regards the water-supplies available, the filters provided for the force and

the difficulties that were in practice encountered in their use, Dr. Castellote has some very pertinent remarks to make. Whenever possible the best and most certain way of purifying or rather sterilising water is by boiling it, and that process, he tells us, was largely followed on failure of the filters. The transport of the sick and wounded—always a matter of difficulty—was by land and water. The superiority of the Ashanti hammocks to the ordinary army pattern stretcher for land transport was very soon demonstrated. Transport by river is ordinarily the easiest and very best kind of transport for sick and wounded men, but when the patients on the present occasion were got to the water the difficulties were not by any means over. It was altogether a very different affair to boating on the Thames. Three days spent in native canoes that were mere shells cut out of trees in which there was no room to stretch the legs, with intense heat by day and chilly nights, swarms of mosquitoes, and the presence of malodorous native canoe-men and servants as described in Dr. Castellote's notes on the Niger-Soudan Campaign, must indeed have proved a trying experience. He has gathered together a number of interesting observations concerning malarial fevers and other diseases which he encountered in those unhealthy territories; these, as well as his remarks about septic gastro-enteritis and dysentery, are well worth reading. There are, however, a good many points connected with the medical and hygienic history of expeditions in such climates which require still further investigation.

GLASGOW UNIVERSITY AND THE TEACHING OF PUBLIC HEALTH.

THE chair of Forensic Medicine in Glasgow is vacant owing to the resignation of Professor P. A. Simpson and the whole question of the teaching of this subject and of public health in the university is thereby thrown into the melting-pot. At present it seems that tuition in sanitary science at Gilmorehill could be described in almost as short a chapter as that which was once devoted to snakes in Iceland. There were no snakes in Iceland and public health is not being taught in the University of Glasgow. It is true that as a part of the ordinary M.B. curriculum a few lectures on the subject are given by the professor of forensic medicine, but students taking a course of work to qualify for public health appointments appear to be practically unknown in this great teaching institution. In its own best interests there is no doubt that a strong effort should be made to establish a thoroughly equipped chair and also a science degree, not merely a diploma, in the department of State Medicine. No time so suitable as the present is likely to be found. The financial difficulty is of course the principal one. If it can be overcome by means of benefactions from the merchant princes of Glasgow well and good; but if a complete endowment cannot be got in this way a suggestion is being made that it can be eked out in another fashion. The duties of the forensic medicine professorship are evidently light, involving mainly fifty lectures delivered in the short summer session. For this trifling labour the reward is £600 a year and a professoriate. A project is mooted to do away with this chair, to substitute for it a lectureship at a lower salary, and to devote the balance of the present income to a new chair of Public Health. The scheme seems feasible, and Lord Balfour of Burleigh, the Secretary for Scotland, might well postpone the nomination of a successor to Professor Simpson until time has been given to crystallise the new proposals. Of course, if the matters coming under the head of forensic medicine were themselves of prime importance abolition of the chair could not be thought of. But it is well known that this is not really the case as compared with other university chairs in the Faculty of Medicine, and while there should be no undue depreciation of the one for the benefit of the other, it is a simple fact that the medical school would be greatly stronger in obtaining a chair of Public Health than in retaining the chair of Forensic Medicine. If, however, there be sufficient liberality in the west of Scotland it may be possible to have both. In the sister University of Edinburgh sanitary science now bulks so largely that an entirely new building is to be erected for its accommodation and the present session of Parliament is to see the necessary steps taken for the formal separation of the subjects and for giving to the teacher of public health his proper position as a university professor. Sir William Gairdner, whose well-deserved K.C.B. has in no way diminished his activities, is taking a hearty interest in the matter in Glasgow and it will be a crowning service to the university for which he has done so much if he, whose name is so honourably connected with the first health officership of the city, succeeds in establishing the proposed chair on a permanent and worthy basis.

LONDON'S LUNGS.

IT would be difficult to estimate rightly the good which is done by the institution known as the Metropolitan Public Gardens Association, but a glance at the map of London which is issued with the fifteenth annual report of the association must make it obvious to anyone that its labours have not been in vain. The 368 little red squares with which the map is studded show the works carried out by the association and the undertakings which it has successfully assisted in since 1882. If it were only for the benefit which these open spaces confer upon the children of the poor the association would be worthy of far greater support than it receives; but when we realise the effect which the labours of the association must have upon the health of London generally it is surprising that the Metropolitan Public Gardens Association is not one of the best supported of the institutions whose objects are to improve the condition of our great city.

THE VITALITY OF ENTERIC FEVER BACILLI IN PRIVY-MIDDENS.

THE researches of Mr. Parry Laws and Dr. F. W. Andrewes into the relation of the bacillus of enteric fever to sewage, which were published in 1894, raised, as far as they went, serious questions as to the survival for any length of time of this bacillus in sewage as it exists in an ordinary sewer. It appeared from these experiments that sewage did not form a medium in which much growth of the bacilli took place, and that they underwent destruction in a few days or at most in one or two weeks. Clearly, however, this interval was long enough to enable the bacilli here in question to gain access to the water of rivers or to situations where their environment would differ materially from that which obtains in a sewer. Some recent work on the part of Professor Delépine suggests too the possibility that the bacilli may have a greater power of resistance under certain conditions than the results obtained by Mr. Laws and Dr. Andrewes would indicate, but it has to be observed that the circumstances in the two series of experiments were very far from identical. Dr. Crocker, the medical officer of health of Eccles, submitted to Professor Delépine certain specimens of "filth" procured from between the bricks at the sides and floor of two privy pits which had presumably been specifically contaminated with enteric fever dejecta thirteen months prior to the date upon which the specimens were obtained. It is of importance to note that after the notifications relative to the cases which are supposed to have polluted the privies the pits were emptied and treated with "disinfecting powder" and with chloride of lime, the pits subsequently being "regularly scavenged."

From these facts Dr. Crocker would appear to infer that if the pits were found infected they must have received their infection prior to the notification of the cases—i.e., thirteen months previously. Professor Delépine employing the usual methods was unable to isolate the enteric fever bacillus from the other bacteria present, but by taking advantage of the motility of the bacillus and by employing a special method, all the details of which he has not yet made public, he was enabled to obtain colonies of the bacillus in question. This discovery of the enteric fever bacillus in the walls of a privy-midden is one of considerable importance, and we shall await the results of further work in this direction with much interest. What, however, does the discovery in this instance teach us? The inference that the pits were infected thirteen months before the discovery of the bacillus is, it appears to us, not a legitimate one. Presumably the pits were in use during the thirteen months here referred to, and the fact that no case of enteric fever was notified in connexion with these pits during this period can only be accepted as meaning that no case of the disease was recognised. To assume that notification is instrumental in telling us of all cases of infectious disease is to assume that the science of diagnosis has reached a state of perfection to which we fear it can hardly lay claim. Then again there arises the question as to whether the discovery teaches us that the bacillus can maintain its existence in a privy-midden or whether it can only survive when it gains access to the organically polluted earth which probably exists between the bricks of an ordinary privy-pit. Under any circumstances the results of Professor Delépine's investigations are highly interesting and we should like to see them applied to fæcal matter taken from the contents of a privy-midden. That the bacilli can exist under these circumstances for a limited period is certainly probable from an etiological standpoint, since the evidence as to the influence of the dried contents of privy-middens in the causation of enteric fever is decidedly strong.

THE ARMY ESTIMATES FOR 1898-99.

A GOOD many people who do not commonly consult the Army Estimates will probably refer to them with some interest and curiosity at the present time; but it is to the explanatory memorandum of the Secretary of State for War and not to the Estimates that they will mostly turn, in the belief that it is in this memorandum, if anywhere, that the intentions of the Government in regard to the army will be found. Moreover, it is not everyone who has the courage to charge a *chevaux de frise* of figures or the time and patience required to encounter an attempt to analyse them. Lord Lansdowne has mainly followed the lines which he has already laid down in his speeches and his steps in this direction are those advocated by the more prominent of recent army reformers. Whether the War Minister has gone far enough is another matter, but as the subject will soon be thoroughly thrashed out in Parliament we need not enter upon this at present. We gather that the principle of the double battalion system is to be adhered to and that a large accession to the strength of the army will be made, for which purpose a large number of recruits will be necessary. In order to procure these the War Minister has, of course, to endeavour to increase the popularity of the army and to offer better terms to the classes from which recruits are obtained. A certain number of men will as an experiment be allowed to enlist in the Infantry of the Line for a term of three years with the colours, with the option of extending such service to seven years. In effect the soldier is in future to have a clear shilling a day, but this increase will be received only by men who are nineteen years of age and are efficient and will not be given to men enlisted for three years' colour service. A scheme for providing volunteers for military service in small wars from the reservists is to be brought forward and a number of other matters are discussed into which we need not enter. Those who are interested in the subject have already had an opportunity of reading Lord Lansdowne's memorandum for themselves. Turning to the Army Estimates we cannot find, as far as the figures tabulated under the headings of the different votes are concerned, any clue to the intentions of the War Office regarding the army medical service. The pay, &c., of the medical establishment in the Abstract of Army Estimates (effective services) for 1898-99 is set down as £295,800 net, the same as last year. The sum estimated for pay of militia medical officers and civilian medical practitioners in 1898-99 is £14,500, as against £10,600 in 1897-98. The Medical Staff estimated for in 1898-99 is 953, of which number 335 are on the Indian establishment. The total pay of the Medical Staff, British establishment, is given as £174,320 home and £54,780 colonial; the estimate for 1898-99 being £229,100, as against £233,200 for 1897-98. The estimate for the Army Medical School, Netley, is £3150, as compared with £7900 in 1897-98.

THE UNIVERSITY OF LONDON COMMISSION BILL.

THE Duke of Devonshire has lost no time in redeeming one of the promises given by the Government of future legislation. On Monday evening last His Grace introduced into the House of Lords a Bill for the reconstitution of the University of London on lines that are familiar to all readers of THE LANCET. The Bill was read for the first time and being brought on the *tapis* in this manner at the beginning of the session has certainly a chance of surviving until the attainment of a practical issue. There will be opposition, much of it honest and well organised, some of it racial, religious or greedy; but as both political parties have at different times promised to support a measure having for its object the reconstitution of the University of London we cannot but hope that legislation will at last put an end to the present chaotic condition of things and the friction necessitated by the protracted struggle. We shall print the Bill in an early issue of THE LANCET with such comments upon it as we think necessary for its elucidation.

VACCINATION LEGISLATION AND THE JENNER SOCIETY.

A MEMORIAL to the President of the Local Government Board is being promoted by the Jenner Society and has already been influentially signed in the county of Gloucester. The memorialists urge: (1) the need for early legislation "with the view of so ordering the practice of vaccination that whilst reasonable regard shall be shown to parental objections the safety of the community shall not be seriously jeopardised"; (2) that the concession to conscientious objection should be in the form of temporary suspension of the legal requirements, (3) the obligation being revived at school age, or if further suspended, (4) again enforced when the child is about to leave school. The memorial (5) also urges the enforcement of re-vaccination about the age of twelve years and the continuance of the practice for all persons entering the public service. Lastly (6), the transference of vaccination from Poor-law boards to sanitary authorities is advocated. From the report of the Executive Committee of the Jenner Society for 1897 we regret to learn that from lack of resources the society is unable adequately to perform the task it set itself—namely, that of enlightening the public as to the value of vaccination and the correction of misstatements by objectors. We trust that the proposal to

reorganise the society and extend its limits will be successful, yet past experience shows that save in times of small-pox invasion the public are wont to be very apathetic on the question. We do not, however, think that it is either desirable or seemly for the medical profession to take a prominent part in such propagandism, partly because of the opportunity thus given to the baseless and calumnious assertion that the profession are guided in their advocacy solely by their financial interest in the maintenance of the practice. We can, however, show by precept and example that our confidence in Jenner's discovery is unshaken and is firmly founded and if the people at large prefer to follow the lead of ignorant and prejudiced advocates they must reap the consequences of their folly. On the other hand we feel persuaded that the British people in general will not be so deluded and that they will rally to the support of a movement which appeals to their self-interest as it does to their philanthropy.

NERVE CELLS IN ALCOHOLIC NEURITIS.

IN the *Comptes Rendus des Séances de la Société de Biologie* Déjerine recently related an interesting observation. A man given to considerable alcoholic indulgence began to suffer at the age of forty-one years from severe multiple neuritis affecting all four extremities. There was considerable atrophy with contractures and general hyperæsthesia. In the course of the next three years there was slow improvement, so that the upper extremities again became normal. The lower, however, remained as before, completely paralysed. In the following year death ensued as a result of cirrhosis of the liver. Microscopical examination revealed considerable alterations in the cutaneous and motor nerves. The spinal cord, examined by Nissl's, Marchi's, and the Weigert-Pal method, revealed no alterations in the cells or in any other part and the case shows that in spite of very great alteration in the peripheral nervous system the anterior cornual cells may remain unaffected in alcoholic paralysis.

THE GENERAL MEDICAL COUNCIL AND DENTAL EDUCATION.

A CORRESPONDENT sends us a long communication on the subject of the General Medical Council and Dental Education. In the course of his remarks he states that the question of dental education has never received the careful consideration it deserves by discussion between representatives of the various schools concerned and at the gatherings of the British Dental Association. He maintains that dentistry possesses such possibilities as to constitute it a *distinct profession*, although requiring many elements of medical science. He enters a protest against the suggestion that dental practitioners should take a medical qualification and makes the somewhat futile remark that it might as well be suggested that all surgeons should take a dental qualification. The period of study allotted to the curriculum—namely, from four to five years—he considers none too long, but suggests pruning the general side, and this he thinks can be done, not only by the limitation and better arrangement of attendance at the general hospitals, but by insisting on special courses of lectures being given by the lecturers in general medicine and surgery and in general anatomy and physiology confined to the enunciation of general principles as detailed consideration of the direct and indirect influence on local conditions. He would like to see added a course on general pathology and an elementary course on biology as the latter will give the student a greater interest in dental anatomy. Further study of dental materia medica, metallurgy, physics, electricity, jurisprudence, and bacteriology he considers desirable. The question of dental representation on the General Medical Council is then referred to and he maintains that the only qualification for such a representative should be the L.D.S. The views held by our correspondent are by no means in accord with our own upon this important subject and although space will not enable us to discuss the question fully we feel that any curtailment of the general side of the curriculum can only be extremely detrimental to dental education. Dentistry is something more than the mere filling of a tooth or insertion of an artificial denture and every day brings to light fresh facts which tend to show that dental disease is much more closely related to general systemic conditions than is usually considered to be the case and it is therefore not difficult to see that for a dentist to carry out his profession in anything like an intelligent manner he must certainly have a good sound knowledge of the whole body both in health and disease.

THE MEDICAL SCHOOL OF CAMBRIDGE UNIVERSITY.

A MEETING is to be held at the Rooms of the Royal Medical and Chirurgical Society, 20, Hanover-square, W., on Wednesday next, March 2nd, at 4.30 P.M., to discuss the question of raising funds in aid of the Medical School Buildings at Cambridge and to form a committee to act in the matter. Dr. W. H. Dickinson will take the chair and the Right Hon. A. J. Balfour, M.P., Professor Jebb, M.P., Professor Clifford Allbutt, Professor Michael Foster, and others will address the meeting. The Vice-Chancellor and the Right Hon. Sir John Gorst, M.P., will also be present and it is hoped that all medical graduates of the University and others interested in the progress of the school will be able to attend.

THE BILLS FOR THE WATER BILLS OF THE LONDON COUNTY COUNCIL.

A RETURN has been asked for by an order of the House of Commons which should show the amount expended by the London County Council upon the question of the metropolitan water-supply since the year 1890—

(*a*) In prosecuting and conducting inquiries and negotiations relative to the supply of water, or companies supplying water, in or near the Administrative County of London, under the London Council (General Powers) Act, 1890 [53 & 54 Vict. c. ccxliii], section 38, which sum was limited to £5000;

(*b*) In making inquiries as to the existing supply of water within the metropolitan water area and the charges made for the same and as to the possible sources of supply under the London Water Act, 1892 [55 & 56 Vict. c. cxxx.], which was limited by section 3 to a sum of £10,000 in addition to the sum which the Council were authorised to pay for similar purposes by section 38 of the London Council (General Powers) Act, 1890, above mentioned;

(*c*) Distinguishing any sums expended upon like purposes during the period in question which may have been considered as properly applicable to the cost of the promotion of any Bills in Parliament dealing with the general question of water-supply within the whole of the metropolitan water area.

The return has now been presented to the House, which shows that under (*a*) £5000 has been spent and under (*b*) £7026 0*s*. 1*d*. With regard to (*c*) the return says:—

Sums expended upon like purposes during the period in question which may have been considered as properly applicable to the cost of promotion of any Bills in Parliament dealing with the general question of water-supply within the whole of the metropolitan water area, the Comptroller of the London County Council states as follows: There are no sums expended under heads (*a*) and (*b*) which are to be "distinguished" as properly applicable to the cost of the promotion of Bills in Parliament, but as the Council are anxious to avoid any misapprehension that might arise if they confined themselves strictly to the information asked

for I am directed to add that the total sum expended by the council in promoting Bills in Parliament relating to the supply of water in the administrative county of London has amounted to £29 900 13*s.* 3*d.*, and this sum is additional to the sums specified above.

These are, of course, large figures, but the interests at stake are so colossal that an expenditure of £40,000 cannot be regarded as wanton extravagance and the party politicians who take such a view are either badly informed or careless of any but party interests.

THE EPIDEMIC OF TYPHOID FEVER AT MAIDSTONE.

THE inquiry into the Maidstone epidemic which has been held by the Local Government Board has now come to an end. At the last meeting Mr. Howlett stated on behalf of the County Asylum that the water company was under a contract to supply the asylum with good and wholesome water. He attributed the outbreak solely to the water. Neither faulty drainage nor sewer emanations, the alternative explanations, could apply to the asylum. Mr. F. R Parker spoke on behalf of the town council and Mr. J. S. Davy in closing the inquiry said he hoped that the result of their investigations would be the removal of many apprehensions and the establishment of a better feeling in Maidstone.

THE ROYAL MEDICAL AND CHIRURGICAL SOCIETY: A SUCCESSFUL DINNER.

THE Fellows' dinner of the Royal Medical and Chirurgical Society was held in the Whitehall Rooms on the evening of Thursday, Feb. 17th. The President, Dr. W. Howship Dickinson, took the chair and was supported by about 100 Fellows and their guests. The guests of the society were the President of the Royal College of Surgeons of England, Sir William MacCormac; the Vice-Chancellor of Cambridge University and Master of Downing College, Dr. Alexander Hill; the Regius Professor of Physic, Cambridge, Dr. Clifford Allbutt; the President of the Clinical Society of London, Mr. John Langton; and Mr. J. Y. W. MacAlister, the resident librarian of the society. An excellent dinner was provided. The President briefly but in well-chosen words proposed "The Health of the Patron of the Society, Her Majesty the Queen," and was followed by Professor Allbutt, who in proposing "The Society" sketched its growth from its foundation in 1805 to its present position as premier society of this country. He alluded to the immense service rendered to the Fellows by its valuable library. This toast was fittingly responded to by the President. Mr. Hutchinson next proposed "The Royal College of Physicians of London and the Royal College of Surgeons of England," coupled with the name of Sir William MacCormac, who expressed regret at the enforced absence of the President of the Royal College of Physicians of London, Sir Samuel Wilks. The toast of "The Sister Societies" was very happily proposed by Sir Richard Douglas-Powell, who described the rise of the various societies which had sprung from the parent stem during the last ninety-three years and referred to the various efforts that had been made to combine the societies into an Academy of Medicine. Provided the societies retained perfect autonomy he thought this idea might yet be realised with great advantage. Mr. John Langton, President of the Clinical Society of London, responded. In proposing "The Guests of the Society" Mr. Timothy Holmes briefly alluded to the great services rendered to medical science and to the profession by Sir William MacCormac, Dr. Alexander Hill, Professor Allbutt, and Mr. Langton, and referred to Mr. MacAlister as "that gentleman to whom the society owes more than to anyone else." An eloquent and humorous speech from Dr. Alexander Hill, responding for himself and fellow guests, brought this most successful (and we trust we may say "annual") gathering to a close.

CHILDREN AND STONE-THROWING AT TRAINS.

THE Education Department has addressed a circular to school managers dealing with the subject of stone-throwing. In it Sir George Kekewich says:—

"The serious mischief that results from the practice of stone-throwing has been again brought forcibly under the notice of the department by the recent death, under the most painful circumstances, of an experienced engine-driver, who died in consequence of injuries caused by a stone thrown from a railway bridge under which his train was passing. There is no doubt that school children are the offenders in many similar cases where life or property is endangered. I am to request that the managers of your school will be so good as to caution the children seriously against the practice of mischievous or reckless stone-throwing and to point out to them the disastrous consequences that may ensue."

Among the multiplicity of subjects which the School Board teaches, or tries to teach, are natural philosophy and mechanics. Under one or other of these headings it might impress upon the minds of children that if an engine-driver comes into contact with a stone when he is going sixty miles per hour the effect is the same as if he were to stand still and be hit by the same stone travelling at the same rate. We earnestly hope that the disastrous consequences mentioned in the circular may include a smart application of the birch-rod to that portion of the body which has been generously supplied by Providence with some sixteen different sensory nerves.

THE GREAT NILE DAMS.

THE most important thing in Egypt is without question the Nile, for if that famous river were to dry up or be diverted from its present channel the result would be speedy destruction throughout the entire land of all animate creatures except the rare forms than can survive in a waterless desert. As a habitable country Egypt owes its existence solely to the Nile. Without water man cannot live, and save for the supply brought down from Central Africa and Abyssinia the essential fluid is nowhere obtainable. The Nile feeds all wells and springs and even in the deep borings that have lately been carried out with considerable success the fountain-head is still the same. When an entire population numbering between 8,000,000 and 9,000,000 souls is dependent on one single source for its potable water every effort ought to be made to maintain the purity of that source, but unfortunately in Egypt this is far from being the case. On the contrary, the river and its derivatives are converted into common sewers, being habitually made the receptacles for ordure and filth of every description. As long as the stream flows rapidly the effects of this abominable pollution are not marked, but when the current grows slack the quality of the water quickly deteriorates, and when, as so constantly occurs during the summer, the flow ceases altogether the contents of the stagnant pools become not only offensive to the smell but absolutely poisonous, little children in particular succumbing in appalling numbers. Such being the disastrous condition of things in a country with which nature has dealt so bountifully the news that at last a contract for the construction of two great dams for the storage and control of the water of the Nile has been concluded with an English firm will rejoice the hearts of all sanitarians who take an interest in Egyptian matters. Although intended primarily for irrigation purposes during the low-Nile season the water held up behind these dams which would otherwise run to waste

into the Mediterranean Sea will also most effectually subserve the interests of hygiene by sweeping away all accumulations of refuse and putting an end to stagnation. When the Assuan reservoir with its head of forty-six feet of water is complete and in operation there should certainly be an improvement in the death-rate of infants during the Egyptian summer.

CHARGES TO PATIENTS IN ISOLATION HOSPITALS.

DR. M. YOUNG has forwarded us a copy of his paper (reprinted from the *Medical Magazine*, October and November, 1897) on Charges to Patients in Isolation Hospitals. Dr. Young is medical officer of health and medical superintendent of the corporation hospitals in the borough of Crewe. Like most other medical officers of health he approves of making the admission of patients of all classes into isolation hospitals easy and argues that the law does not sanction any other charge than one that covers bare maintenance. He thinks that ratepayers should be admitted to "their own hospitals"—a misleading expression. They are no more entitled to be admitted to their own hospitals than to their own workhouses. They should prove fitness and especially their inability to secure isolation at home. At least, this is our reading of the law. It is painful to read in Dr. Young's paper the proofs of the eagerness of the public to avail themselves of isolation and medical treatment at the public expense. Thus Mr. Gornall, medical officer of health of Warrington, is quoted: "Years ago we had endless difficulty in getting patients into the hospital. Whether it was owing to our then charging for treatment, or to sentiment, or to prejudice, I cannot say, but since we declared the hospital free there is no objection even by the well-to-do to the removal of cases." Dr. Herbert Manley, medical officer of health of West Bromwich, says: "Our neighbours tried to collect for charges of maintenance, &c., but the effect on the removals was so great that they abandoned it. People will use the hospitals gratis but they won't pay." Such sentences are very interesting from a sociological point of view and suggest that our isolation hospitals, unless regulated, as they were meant by law to be, by the Local Government Board, may become a powerful means of demoralisation to classes that would shudder to be considered as paupers.

INFANTILE DIARRHŒA.

AN interest, always fresh if not always the happiest, attaches to the pathology and the treatment of diarrhœa especially in childhood. Its varying causation, its difficulties, the sudden and rapid improvement which even in desperate cases has often rewarded its judicious management suffice to explain why this disease has so frequently been treated in the monographs of practitioners. By one or other of these a variety of dietary and medicinal measures have been extolled from time to time each in different ways illustrating rules of treatment which are successful because they are founded on a rational pathology. The questions before us in such cases do not concern merely a choice of drugs. The value of many such may be freely admitted, but this is not enough. Our first duty is rather to ascertain the stage of the disorder, the presence or absence of irritant matters in the bowel, and to decide as to the means of their removal if present. Even this last, though an apparently rational proceeding, is not always immediately advisable, since nature may already have exerted her energies to exhaustion. The routine aperient is not then appropriate. So with astringent remedies; now it is chamomile, now bismuth, now rhubarb and opium, now another. Each case is its own evidence, though it is none the less indebted to the practitioner's experience of others like it. In giving bismuth the best rule is to give it freely. Dr. A. C. Dutt in a short paper on this subject speaks highly of tincture of chamomile, which he found invaluable in a recent epidemic of infantile diarrhœa. A suitable diet is of course of the first importance in diarrhœa. How often the disorder is kept up in infancy by a persistence in milk diet has frequently been proved. In such cases a temporary cessation of milk and the adoption of raw meat juice in its place has repeatedly turned the tide of illness towards recovery. These three points therefore—the removal of irritant matter if practicable by a moderate purge or enema, the use of bland astringents, and the careful regulation of diet—constitute the substance of treatment in diarrhœa. More precise details must be left to the judgment and experience of the practitioner to whom each case is an individual microcosm of instruction.

THE ROYAL COLLEGE OF PHYSICIANS OF LONDON: THE LECTURES FOR 1898.

THE following dates have been fixed and subjects have been announced for the official lectures of the year. The Goulstonian Lectures will be delivered by Dr. J. Rose Bradford, F.R.S., on March 15th, 17th, and 22nd on the Pathology of the Kidneys; the Lumleian Lectures will be delivered by Sir R. Douglas Powell on the Principles which Govern Treatment in Diseases and Disorders of the Heart; and the Milroy Lectures will be delivered on May 3rd, 5th, and 10th on the Natural History of Vaccinia by Dr. S. Monckton Copeman. We regret to hear that the delivery of the Milroy Lectures, which was arranged for next week, has been postponed owing to the illness of Dr. Copeman. The lectures will be delivered at the college at 5 P.M. on the respective Tuesdays and Thursdays indicated by the dates.

INQUESTS WITH UNSATISFACTORY RESULTS.

TWO inquests have recently been held by the deputy coroner at Poole, Dorset. The deputy coroner is a medical man, Mr. W. Turner, and although we have always said, and always shall say, that a coroner ought to be a medical man, it seems to us that in both these inquests the primary object of an inquest—namely, the ascertaining of the cause of death—was not attained. The first inquest was held on Feb. 10th on the body of an infant, aged one year and nine months. It was said to have been delicate from its birth and was blind. It had been suffering from a cold, and the mother sent for Mr. Carrington, but the child died before he arrived. The jury returned a verdict of "Death from natural causes." No medical evidence was called or given at this inquiry. The second inquest, held on Feb. 15th, also by the deputy coroner, was on the body of a child aged two years and nine months. This child, according to the mother, had always been delicate. The boy had a cough on Feb. 13th and was given some cough mixture and also some milk and port wine. On Monday morning the child seemed to have a fit and the mother sent for Mr. Bond, but the child died before he arrived. The coroner is reported as saying that he thought the milk and port wine were calculated to cause sufficient nervous irritation to produce convulsions, which were doubtless the cause of death, together with the fact that the child was in a rickety condition. The jury returned a verdict that death was due to convulsions, the result of improper food being ignorantly administered, and that the parents had been guilty of neglect in not obtaining medical attendance. At this inquest there was no post-mortem examination made or any medical evidence called. A verdict of death from convulsions is a useless one—nearly every person has convulsions of some sort before death—and we should much like to

know why no medical evidence was called. It was all the more necessary in this case for the parents of the child, according to the coroner, were within measurable distance of being tried for manslaughter. For a court to find that a death arose from convulsions upon the sole evidence of two non-medical people is to bring such court into disrepute.

"A MISERABLE PIECE OF EXTORTION."

"But when ..... he seeks his fee
The devil looks less terrible than he."

HIS Honour Judge Emden has been several times commended in these columns for his action with regard to the modern method of taking the oath. But we are sorry to see in the report of a case which came before him recently that he does scant justice to the medical profession. The case was tried on Feb. 15th at the Lambeth County Court and was an action brought by a woman against the owner of a house where the plate covering the coal-cellar was out of order. Mr. Colam appeared for the defendant and read a letter from Dr. R. P. Rowlands, the house surgeon at Guy's Hospital, who attended to the woman. This letter embodied a report upon the patient's condition and Dr. Rowlands incidentally mentioned that he generally did not send in these reports without first receiving his fee, but upon this occasion he did so. The fee was two guineas. Judge Emden remarked that the fee was too much and went on to say that "for a responsible professional man in a hospital to exact these high fees from the poor is shameful. It is a miserable piece of extortion of which this is not the first instance that has come under my notice." Evidently his Honour, like Mrs. Gilpin, has a frugal mind. Surely if a patient is rich enough to bring an action he or she is rich enough to pay for a medical report. We are quite certain that the plaintiff's counsel did not act for her for nothing and why should he? But in this case the report was not drawn up for the poor plaintiff but for the rich defendant, so the extortion plea falls to the ground. Lawyers never work for nothing and why should medical men? Drawing up this report was quite outside Dr. Rowlands's hospital duties and there is no doubt whatever that he is entitled to his fees.

THE NINTH INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY.

La Higiena Popular of Madrid announces that all the Spanish railway companies and the Spanish transatlantic steamship companies have agreed to grant a reduction of 50 per cent. in the cost of tickets to all members attending the forthcoming International Congress of Hygiene and Demography. To obtain this reduction in the railway and steamship fares the members of the Congress must show at the booking-office a *cédula de identificación*. This paper or card of identification will be forwarded by the general secretary of the Congress to all who have paid the fee of membership. This fee, amounting to 25 pesetas, or £1, should be forwarded at once to the treasurer of the Congress, Señor D. Pablo Ruiz de Velasco, President of the Madrid Chamber of Commerce, Member of the Municipal Board of Health, &c., Madrid. A similar reduction in the cost of freight is granted for all objects sent to the Exhibition of Hygiene to be held in connexion with the Congress. As we have already announced in THE LANCET of Jan. 8th, 1898, Dr. Amalio Gimeno is the general secretary of the Congress and communications should be addressed to him at the Ministry of the Interior, Madrid. The Congress is represented in England by Sir Douglas Galton, Dr. Corfield, and Dr. Moline, and we hope that these gentlemen will be successful in their efforts to secure the presence at Madrid of numerous representatives of British sanitary science. In continental text-books on hygiene the sanitary progress accomplished in Great Britain is frequently mentioned and lengthily described. Those who contributed to bring about such progress will be expected to give some account of the good work they have helped to accomplish, and on this occasion it may well be said *noblesse oblige*. The time is now rapidly approaching when the Congress will meet and it is not fair to the organisers to leave everything to the last moment. Those willing to speak or read papers should therefore send in their names and subjects at once. The Congress will commence on April 10th and will last till the 17th, but the Exhibition of Hygiene will remain open for three months. Written communications must be sent before March 15th. They may be written in Latin, Spanish, Portuguese, Italian, French, English, or German, but must be accompanied with a short summary written either in Spanish or in French. These summaries should be forwarded immediately, for it is proposed to publish them and send them to all members of the Congress before the meeting of the Congress. The members will thus have some knowledge of the principal points and arguments to be brought forward before the Congress meets and will therefore be better able to take part in the discussions. Again we urge that there is now no time to lose and that intending members must send a notification of their intentions and subscriptions at once together with a summary (written either in French or Spanish) of the papers which they intend to read.

DR. W. S. PLAYFAIR, having reached the age limit, will retire from the duties of the chair of Obstetric Medicine and the Diseases of Women and Children at King's College, together with those of the appointment of physician for diseases of women and children and physician accoucheur at King's College Hospital, at the end of the winter session. Dr. Playfair has been connected with King's College and King's College Hospital for the past thirty-five years.

THE Fellows of the British Balneological and Climatological Society will dine together at Limmer's Hotel, Conduit-street, at 6.45 P.M. on Wednesday next, March 2nd, previously to the ordinary meeting of that date. Those intending to dine should communicate with the secretaries, Dr. Septimus Sunderland, 11, Cavendish-place, W., and Mr. A. A. Macfarlane, 1, Montpelier-terrace, Brighton, before March 1st.

DR. JAMES CANTLIE will deliver an address on the Organisation of the Colonial Department at the Imperial Institute on Wednesday afternoon next, March 2nd, the paper forming an introduction to a discussion on the subject. The chair will be taken at 3 30 P.M. by Sir Joseph Fayrer.

THE death is announced at Cairo on Feb. 23rd of Sir James Mackie, K.C.M.G., LL.D., M.B.Aberd. The deceased was born in 1838 and was physician to the Khedive and surgeon to the British Consulate.

THE Lord Mayor will preside at the Mansion House on the afternoon of Feb. 28th over the annual meeting of supporters of the Royal Hospital for Children and Women, Waterloo-bridge-road, S.E.

MISS FLORENCE EVA MORGAN, the acting lady superintendent of the General Plague Hospital and Nursing Establishment, Bombay, has died in that city from the plague.

THE Acting Governor of Jamaica has reported by a despatch dated Jan. 31st that the island was at that date entirely free from yellow fever.

NOTES ON THE

NIGER-SOUDAN CAMPAIGN OF 1896-97.

BY R. HORACE CASTELLOTE, M.D. LOND., F.R.C.S. ENG.,

LATE EXPEDITIONARY MEDICAL OFFICER TO THE ROYAL NIGER COMPANY.

(*Concluded from page 457.*)

GENERAL HYGIENE AND SANITATION.

WITH one or two exceptions we only occupied each camp for one night at a time. On our return marches the same camps were reoccupied, but the interval which elapsed was sufficient for the kites, ants, and other scavengers of nature to clear the ground of all that was offensive and render these camps as good if not better than new ones without the labour of clearing the ground of undergrowth. In the camp outside Bida, which we occupied for three days and also to a less extent in Bida itself, where we stayed four days, the difficulties of keeping the camp healthy were very great. The whole force at the former position was necessarily for military purposes huddled together as close as possible, as we had to keep the square formation. The condition of affairs in consequence became so unbearable for the white men that it was found necessary at the end of the second day to remove the officers' tents a short distance outside the lines, though even then the position was anything but agreeable. Several causes contributed to this trouble. In the first place we were encamped on the scene of a two days' battle and though the bodies of most of the enemy killed had been removed by their friends in their retreat and at night, there were many fragments of dead men and horses scattered about within a short distance of the camp which in the intense heat of the tropics began to decompose in a very few hours. In addition, the early reconnoitring parties into Bida and the surrounding villages had returned with large quantities of livestock which were eagerly seized by both troops and carriers, to whom a good meat meal is a great luxury. The killing and disembowelling of these took place in the camp and no attempt was made by the natives to cover up or dispose of the offensive refuse, which consequently in a few hours began to contribute to the malodorous condition of the surroundings. The natives also were very lax in the matters of nature. Either from indifference or fear they could not be induced, especially at night, to wander more than a few yards from the lines, and though the officers all did as much as they could to enforce more care in this and other objectionable practices it was impossible for a mere handful of thirty-two white men to wean more than 1000 natives from ingrained habits of filth and beastliness in a few days.

One of the most disagreeable results of this insanitary condition was a terrible visitation of the common fly, which infested every place, and its powers of biting were greatly superior to those possessed by flies of home production, more resembling the sting of a bee but without the resulting inflammatory reaction. If the theory of the infection of micro-organisms by flies is correct it is a wonder that we did not all suffer severely from boils, &c., but as it was no bad results followed the visitation. It was fortunate that we were able to vacate this position on the third day as I fear we should have undoubtedly had some serious epidemic had we stayed there much longer. As regards the possibly bad results of this camp on the natives I shall have more to say under the head of "dysentery."

In the town of Bida itself the military conditions were much more favourable to the carrying out of sanitary regulations. The enemy had evacuated the place and retired many miles from the town, so that more space was available for the arrangement of the camp, and one great advantage was that the carriers were segregated a short distance from the white men and troops in a compound by themselves. In addition separate buildings and compounds were set apart for the stabling of livestock, for killing, and for latrines, all more or less remote from the camp, and each provided with a military guard. Guards were also mounted over wells that we considered unwholesome. The other wells were allotted to the different sections of the force. So that with all these arrangements the condition of affairs in Bida was an improvement on that in the camp outside. But we were followed by a strong contingent of the flies, which at the end of our stay in the town became almost as troublesome as they had been before. I fear also that in spite of the improved methods of sanitation the healthy state would not have survived many days longer, as when we were leaving the odours of decomposing animal matter in the surrounding compounds were already beginning to make themselves objectionable.

DISEASES.

The climate of the Royal Niger Company's territories can hardly be considered a healthy one. But the prevalence of disease varies considerably in the different parts. The lower river and delta regions are undoubtedly admitted to be the worst with their low elevation, thick vegetation, and moist air. As one ascends the river one comes to regions where the elevation is greater, vegetation more scanty, and where during a good part of the year the prevailing wind is the dry, hot Harmattan blowing from the north off the Sahara and often heavily charged with fine sand, giving the appearance of mist. In general terms the higher one ascends the river the less sickness there is amongst both white and black men. I have already endeavoured to show the nature of the country through which we had to pass in the several expeditions, with a comparison of the amount of disease prevailing. Throughout the campaign out of thirty-two white men engaged in the Bida expedition only one got through without having been ill in some way or other. Of those directly engaged in the expeditions we were fortunate in losing only one man from sickness, but one or two others got fairly within sight of a speedy end. Two or three officials died in the river during the time.

There seems to be no question that with more care in matters relating to exposure, food, and drink the West Coast of Africa need not have such a high mortality and consequently such an unenviable reputation among white men as it now has. The prevailing affections were malaria and gastro-intestinal troubles and of these I shall endeavour to emphasise only those points which may be considered important and unusual or in any way peculiar to the country.

Malaria.—The types of fever met with in the Niger Company's territories are most irregular. We never saw a typical ague attack with its characteristic hot and cold stages. In the remissions and intermissions there is great irregularity but most of the attacks approach the quotidian type.

As regards etiology it is generally supposed that exposure to the sun is a very potent cause of malarial attack, but in this connexion I am very much inclined to think that many short attacks of pyrexia following exposure which are usually put down to malaria are in reality mild attacks of insolation. They are quite short in duration, often lasting not more than a few hours, and with no recurrences; the usual drugs—antipyrin and quinine, so useful in malaria—are apparently ineffective in lowering the temperature and the fall when it does occur is unaccompanied by the profuse sweating that is so typical and, at the same time, so uncomfortable in the true malaria attack.

But in spite of these facts it is very possible that some malarial attacks are really brought on by exposure to the sun and in this connexion the comparative freedom of women on the west coast from malaria may have some bearing, but in the absence of careful microscopical search for the plasmodium it is difficult I think to differentiate these two nearly identical conditions. The possibility of malarial infection by water was presented by one or two facts. The only white officer who got through the campaign without an attack of some sort assured me that he had not touched a drop of unprepared water during the whole time of his stay on the Niger. He had had several attacks in East Africa at a time when he was not so convinced of the importance of this precaution. Mr. Stanley, I believe, emphasises the importance of sterilising water in combating malaria. It may be possible that the plasmodium is really introduced into the system by water, but that its manifestation as a fever attack is caused by certain atmospheric conditions. The influence of newly-disturbed virgin soil in causing fever was forcibly shown by one case. A white official in the Delta region had occasion to get a grave dug for an officer who died there. He was a man who had lived for many years in malarial climates, had had many attacks, but of late years these had been quite mild and at long intervals, and he had begun to imagine himself almost immune. The ground in which the grave was dug was moist and swampy and closely surrounded by dense vegetation and as the earth was removed the hole

partly filled with water. Instead of simply giving directions to the native labourers and leaving them to complete the work he remained standing about the place superintending for two or three hours. On the following day he was down with one of the worst attacks of fever I saw, which developed the following day into the blackwater type and as nearly as possible proved fatal. He did eventually recover, with very slow convalescence, and had to leave the country.

As regards symptoms I have mentioned the great irregularity of the febrile disturbance. The onset is usually quite insidious, patients turning up complaining usually of headache or backache or of general slackness. On taking the temperature one may find it up to 103° F. or more. Amongst the most serious and troublesome cases are those with obstinate and continuous vomiting. It is most difficult to treat as the ingestion of antipyrin and quinine is almost impossible, rather tending to increase the vomiting. Even rectal medication in many of these cases is out of the question as profuse and frequent watery stools often accompany the vomiting. As in blackwater fever these bad cases do not occur in the early attacks of malaria as a rule.

The great fatality in the Niger territories and I believe in other parts of Africa from malaria is from those cases which assume the blackwater type; fortunately they are not very common, but when they do occur they make a complete wreck of the patient. It is wonderful to see in a few hours the tremendous anæmia which is produced accompanied by many of the symptoms of acute hæmorrhage, such as great restlessness and sighing respirations amounting almost to air hunger. In the absence of more accurate apparatus for examination it is difficult to say from the appearance of the urine whether the loss is due to hæmaturia or hæmoglobinuria, but I should say it is the latter. I believe it is held by some authorities that in many cases it is really hæmaturia and in the absence of more careful examination I am not prepared to deny this as regards cases in the Niger. Blackwater fever is accompanied by the other severe symptoms in ordinary malaria and here again treatment is difficult owing to the constant vomiting and diarrhœa which are commonly present.

As a general rule, during the white man's first year of residence in the Niger territories, provided he is in good health when he arrives, he suffers a few attacks of malaria of a fairly mild character which do not seriously affect his health in the intervals or on his return to Europe. The most fatal time is between this time and his third year. If he comes safely through this period he commonly experiences less severe attacks afterwards. It is doubtful whether a complete immunity is ever developed, but it is unquestionable that men who have been out five or six years often get on with only mild and occasional attacks which do not lay them up. Of course, to a certain extent this is a case of survival of the fittest, but it is found that many of these men have in their earlier days in the tropics been through severe times. It is rare for sufferers from blackwater fever to pass safely through three attacks and often they succumb in the second. The first attack is frequently not fatal but necessitates a prolonged holiday for convalescence.

The diagnosis of some cases from sunstroke I have already touched upon. The diagnosis of malaria from dysentery is by no means as easy as one might expect in some cases. The probability is that the two conditions are very frequently combined. One sees cases of pyrexia with profuse diarrhœa and frequent vomiting, great abdominal pain, and occasionally blood in the stools in greater or less quantity, in which the only signs of malaria are the great and sudden variations of temperature combined with profuse sweating and sometimes rather sudden onset. Thus these cases at first closely resemble dysentery, and yet the short course they run, the influence of antipyrin and quinine when the patients are able to get it down, and the fairly rapid convalescence, really point to the attacks being malaria complicated with acute gastro-enteritis, which I should place as the most common complication of malaria in the Niger.

In reference to prophylactic treatment, as elsewhere, the regular taking of quinine does much to diminish the frequency and severity of malarial attacks, but in itself is not sufficient to entirely prevent it. Other deleterious conditions acting on an individual who takes his 5 grain tabloid of quinine daily or every other day will undoubtedly produce fever, but usually it runs a milder and shorter course with him than with one who has neglected this precaution. Exposure to sun and chills must be avoided and sleeping in the open air is a very frequent cause of fever. As is well known on homeward voyages, the arrival in cooler climates is often heralded by malarial attacks even in those who have not previously suffered.

It is generally recommended not to take cold baths in malarial districts. I think the importance of this is to a certain extent exaggerated. Certainly if on the march or on arrival in camp one were to plunge into a stream or bath while one is perspiring freely and very hot the result might easily be a chill followed by fever. But a chill would very possibly result from the same thing at home and I do not think that one's morning bath in Africa in water which is never at the most more than cool does anyone any harm. Certainly I felt better after I had had it and no bad results followed. The comparatively good health (as regards fever) which women enjoy on the west coast is probably largely due to the more temperate lives they lead and to the fact that their duties do not necessitate exposure out of doors at the most trying periods of the day.

As regards treatment of fever during the attacks I only wish to emphasise one point that very soon brought itself to my notice. This is that with high fever as a rule it is difficult to give much quinine. It often produces vomiting with consequent cardiac depression and has not nearly the same influence in lowering the temperature as antipyrin; ten or fifteen grains of the latter repeated about every two hours till the temperature falls should be given. When this happens then is the time to administer a good dose of quinine, to be repeated a few hours later and again the following morning before the temperature goes up. In this way remissions and intermissions may very frequently be avoided, in the early attacks especially.

Dysentery.—On the Niger dysentery is a common and very fatal disease, if anything more fatal though less common than malaria. The only white man in the column who died was suffering from dysentery and developed an abscess of the liver. On the Bida expedition by the time we had entered the town and while we were in it there was a very considerable epidemic amongst the native troops and carriers of severe intestinal flux with great pain, copious watery stools and passage of more or less small quantities of blood. One or two white men suffered in the same way. This condition of affairs, I believe, was largely attributable to the unhealthy condition of the camp outside the town and the large amount of more or less putrefying animal matter that the natives consumed. Their method of preparing meat for food was peculiar. Lumps of meat were stuck on sticks in the ground for a day, next day it was just superficially roasted and left for another day; then it was finally cooked and eaten. In this way, although the final cooking may have been supposed to have killed all the putrefactive organisms, there must have been a good deal of the chemical results of putrefaction remaining in the joints and certainly the odours which emanated from them were not enticing to the white man's appetite.

The whole of the above class of cases was probably not true dysentery; in fact, I believe a large majority of the cases were not, but rather cases of severe septic gastro-enteritis. Some cases were short in duration, others went on for some time and were probably cases of true dysentery developing in the mucous membrane primarily damaged by the enteritis which must act as a very favourable predisposing cause. Amongst the Europeans so attacked the possibility of the aerial infection of dysentery on a simply inflamed mucous membrane was suggested by one or two cases in which sterilising precautions on water had been carefully carried out and in which decomposing flesh had not been consumed. The primary enteritis was possibly due to the septic exhalations from the putrefying animal matter in and around camp.

In speaking of this subject of dysentery and ordinary septic enteritis the course of the one fatal case is worth mention, although the intestinal condition started before we reached the unhealthy camps. At the end of from three to four weeks of what was apparently typical dysentery combined with malarial pyrexia, which was much influenced by antipyrin and quinine, symptoms of abscess of the liver developed and ran a very rapid course, the patient dying about a week after the liver symptoms first appeared. The fever, which before the last week had been distinctly malarial in character, with considerable diurnal variations, remained high and was uninfluenced by the previously mentioned drugs. There were no rigors. It was a little difficult at first when the pain and discomfort about the liver occurred to determine whether the enlargement of that

organ was due to anything more than the congestion which so frequently occurs in malaria, but the rapid further enlargement with tenderness on pressure, œdema, and slight redness of the skin soon put that point at rest. Unfortunately we were travelling down river at the time in canoes, launches, &c., and I wished to delay operating until I could do so under more favourable conditions with improved appliances, not anticipating that the case would run such a rapidly fatal course in an otherwise strong, healthy young man. The patient died almost immediately on our arrival at the coast. The development of abscess of the liver so early in the course of the disease and the rapid course it ran is unusual and, I think, points to the hepatic suppuration being of a purely septic or pyæmic nature rather than a specific one as seen in cases of chronic dysenteric abscess of the liver.

The diagnosis of dysentery from certain cases of malaria and the frequent combinations of the two I have already mentioned. The distinction of the disease from septic gastro-enteritis turns almost entirely on the effects of treatment. The latter cases recover rapidly and completely in from two to four days under anodyne and antiseptic treatment. The favourite prescription used was $\frac{1}{12}$th grain of perchloride of mercury, 20 minims of chlorodyne, with water to one ounce, every four or six hours.

The treatment of dysentery proper varies in the cases of natives and Europeans. The former can take large doses of ipecacuanha without unpleasant effects and with marked improvement, but in the case of white men this drug even in small doses produces retching and vomiting which makes the last condition of the patient worse than the first. The same result occurs even when a dose of anodyne is administered a short time previously. The drug we carried was called ipecacuanha sine emetin (!). Those patients who could take a dose of from 10 to 15 grains without vomiting were apparently very little improved by it, so that I very soon gave up the use of this drug for Europeans almost entirely and substituted perchloride of mercury and chlorodyne. The effect of this prescription was at first very marked. The number of stools a day decreased to from two to four and the pain and weakness diminished, but in spite of this improvement complete recovery in most cases took some time, usually three or four weeks. This effect of antiseptic treatment seems to point to the conclusion that much of the severity of the symptoms of dysentery is really due to the septic micro-organisms which even in health abound in the intestinal tract and in disease may readily be supposed to increase and multiply and become more active. Whether the much vaunted treatment of dysentery by perchloride of mercury does more than influence this by-process or whether it has any beneficial effect on the true dysenteric disease is a moot question. I am rather inclined from my short experience in Africa to believe in the former supposition.

A few remarks about diseases occurring in the Niger Company's territories which are less common or less serious will close this portion of my notes.

Guinea-worm.—This was a very common disease amongst those native carriers who came from the coast regions of Elmina and Accra. Often both legs are affected, sometimes two or three worms presenting in one leg. They are troublesome cases in that on the march the suppuration and swelling of the leg soon incapacitates these men so that instead of being useful they become incumbrances. They prefer trying to extract the worms themselves when they present and generally succeed in breaking them. This is one reason in favour of recruiting carriers from the river tribes in preference to the coast regions as the former suffer much less from this complaint.

Beri-beri.—This occurred to a moderate degree amongst the Haussa and Yoruba troops and at the inspection before the column started from headquarters a few men had to be left behind on this account. As far as I could learn the disease is purely of the non-œdematous variety in the Niger. I heard of one rather doubtful case only in a white man and in his case it proved fatal.

Leprosy.—Cases of leprosy are seen from time to time at different places on the river, but none came under my notice.

Elephantiasis, affecting mostly the legs, is not at all uncommon, but unless the legs are very much enlarged it does not seem to greatly interfere with the usefulness of the native. In contrast to Guinea worm, this disease seems to be more common amongst the river tribes than the coast ones.

Abscesses.—One common complaint amongst the natives is large subcutaneous abscesses which apparently in many cases occur without any primary cutaneous lesion. One case I saw had a huge abscess which probably started in the axillary glands and occupied the whole of the front and back and one side of the thorax and from which we got at least three pints of pus.

WOUNDS.

Practically all the wounds received by carriers and soldiers were bullet wounds, mostly of the Snider bullet. The only striking features about these cases were: 1. In many cases the difficulty in telling the wound of entry from that of exit. This is to be accounted for, I think, by the long range—mostly over 400 yards—at which they were fired. 2. The remarkable way in which wounds of the natives heal even under the more or less rough-and-ready treatment that they necessarily receive on such an expedition. Very little, if any, suppuration occurs; even a case of amputation of the shoulder (in one of the enemy) for a bullet wound received three days before, and in which the inner flap had to encroach on the foul-smelling wound, healed up with very little formation of pus and only three or four stitches gave way. Two compound, comminuted, complicated fractures of the lower end of the humerus from Snider bullets healed up without suppuration, one of them getting back complete mobility of the elbow-joint and the other movement through an angle of nearly 90°.

Only one case of arrow wound came under my notice. The arrow heads are thickly coated with poison of some sort, probably decaying animal matter. The case mentioned healed up very well without suppuration after vigorous antiseptic treatment at the time, but for several days the patient suffered from general, and especially cardiac, depression, which raised a suspicion of some vegetable poison, but of what nature it was impossible to say. In some other parts of the Niger territories the arrows are said to be poisoned with strophanthus. One of the officers who was with us had received two wounds previously in those regions and had suffered severely for some time afterwards. Immediately after the wounds he suffered great cardiac irregularity, which left him very weak for some weeks. In other regions, again, the arrow wounds are followed by symptoms of tetanus, but there is great difficulty in determining the exact source and nature of these poisons. Probably many of them are composite.

GLOUCESTER AND SMALL-POX.

(Continued from p. 530.)

FOR many years previously to the epidemic of 1895-96 Gloucester had been comparatively free from small-pox. As in Leicester and many other places, occasional cases or small groups of cases were dealt with without serious extension of the disease. From the reports of the medical officer of health, as quoted by Dr. Coupland, we learn what was the custom in managing such cases. In 1890 six cases were discovered. They were promptly isolated and supervised. After commenting on the earlier of these Dr. Campbell says: "A week or two afterwards two cases occurred in another street of the city, and the same prompt measures were adopted with like result. I feel sure that a threatened epidemic was thus averted, for I have no doubt that had I not been made aware of the existence of the *first two* cases, happening, as they did, in a small house occupied by a large family, and subsequently of the advent of the other cases, in time, probably the city would have had a very serious outbreak of this disease, which might at the present time assume serious proportions from the fact that nearly all, or a large proportion of, the young children of the city remain unvaccinated." This shows how keenly alive the medical officer of health was to the risks of unrecognised cases in a town containing a large number of unvaccinated children. The Notification Act was adopted in 1891. In 1893 three cases were notified and at once dealt with. In 1894 "seven cases were notified at different periods, none of them traceably connected with each other. All were promptly removed and their homes disinfected." In Leicester these would have been described as seven different importations of

the disease, all successfully stamped out by the "method," and the necessity for calling the attention of the Royal Commission on Vaccination and the rest of the universe to such marvellous results would have been duly dilated on. Dr. Coupland states regarding the procedure in Gloucester: "I was informed by Dr. Campbell that the following was the procedure adopted at the earlier period of the epidemic with regard to all cases of small-pox. On receipt of the notification the medical officer of health visited the house, confirmed the diagnosis, and directed the sanitary inspector to remove the case to hospital. Removal was in all cases promptly done. The bedding, carpets, &c., in the rooms occupied by the patients were destroyed by the sanitary authority, and compensation granted by the sanitary committee of the town council. The remaining inmates of the house were then kept at home under 'quarantine' surveillance for a period of fourteen days after the removal of the case. Or, if the case were not removed, the 'quarantine' was prolonged until fourteen days after the patient had been declared free from infection. After the close of the quarantine period the house was disinfected by the sanitary authority. The room which had been occupied by the patient was sprayed with mercuric chloride solution and fumigated with sulphur for a period of six hours. The windows and doors were then thrown open and the floors cleaned with carbolic soap. The ceilings were limewashed and the walls mostly re-papered." As a supplement to vaccination and re-vaccination there is not much left to suggest here in the way of stamping out small-pox. Dr. Campbell in his annual reports had repeatedly called attention to the want of a steam disinfector, and anti-vaccinationists, in the course of their struggles to explain away the Gloucester disaster, have set great store by this fact. Being aware of the defect the medical officer took the best possible way of overcoming it. "The bedding, carpets, &c., were *destroyed* and compensation granted."

The next question is—How the procedure above described was carried out. If we compare the total cases with the total removals to hospital month by month in the Leicester and Gloucester outbreaks we find as follows:—

Month of outbreak.	Leicester, 1893-94.		Gloucester, 1895-96.	
	Incidence.	Sent to hospital.	Incidence.	Sent to hospital.
1st	1	1	1	1
2nd	6	5	—	—
3rd	11	11	3	3
4th	14	14	1	1
5th	37	35	3	2
6th	54	49	7	7
7th	18	17	12	11
8th	21	15	52	48
9th	44	38	145	121
10th	54	52	604	208
11th	32	30	733	214
12th	18	17	283	48
13th	16	15	122	39
14th	7	7	13	9
15th	11	8	—	—
16th	10	9	—	—
17th	3	3	—	—
Total	357	326	1979	712

It will be seen that in the early months removal to hospital was carried out very thoroughly both in Leicester and Gloucester. The differences between cases and removals in the first six months are accounted for almost entirely in both towns by attacks which were at first overlooked or unrecognised. But though practically all known cases were removed to hospital, the question may still be asked, Was every case removed promptly? In giving advice to Coventry, even whilst the Gloucester epidemic was in progress, the *Vaccination Inquirer* remarked: "All depends on the energy and thoroughness with which early cases are dealt with." May there not, then, have been in Gloucester some delays which might account for the remarkable extension of the disease? The reply is unequivocal. Dr. Coupland's table of cases shows that till nearly the end of January (cases having occurred so early as the previous June) every individual patient sent to hospital was removed on the day of notification. Not until the sixtieth removal to hospital was there a delay of a single day, and then the delay was of one day only. Under this system what were the results? In June, 1895, a case occurred. "He was promptly isolated and no further case arose in connexion with his attack." On Aug. 2nd there was another case—a lad in the employment of a commercial traveller who, though not himself attacked, is supposed to have brought the infection into the town. This patient also was removed to hospital on the day of notification. But about the end of the month other cases arose, probably more or less related to the infection introduced by the commercial traveller. No possible system of isolation, quarantine, and disinfection could prevent infection of this sort—where the bearer of it did not himself take the disease and did not even come under suspicion until after the mischief had been done, and only then as a result of carefully tracing back one case and another till the possibility of a common origin began to suggest itself. One of the cases was that of an unvaccinated child where the disease was supposed to be "malignant measles" and caused death in less than a week. These cases occurred in August, September, October, and November. By the end of November the total was fifteen. Each, excepting the unrecognised case, was at once sent to hospital and we have already quoted Dr. Campbell's account of the procedure with regard to quarantine, disinfection, destruction of clothing, &c. Yet the disease was not stamped out. On the contrary, in spite of the continuance of these measures the outbreak rapidly extended till the hospital could hold no more and became overcrowded. In December there were twelve new cases; in January, 1896, fifty-two; and in February, 145. In its issue for March the *Vaccination Inquirer*, with its usual fatuity, airily referred to "the recent outbreak" in Gloucester. Instead of being a thing of the past the epidemic was only approaching its climax. In March there were 604 cases and in April 733 cases. After this a rapid diminution set in, the total ultimately reaching 1979, besides three cases that occurred after Dr. Coupland's inquiry had ceased. Clearly, therefore, removal to hospital, quarantine, and disinfection proved quite unable to prevent a tremendous spread of the disease. Indeed, it will be observed from the table above given that hospital isolation had nothing to do with the checking and ultimate cessation of the epidemic. The hospital was very little used in the later months and yet the cases in the town diminished, though hundreds were being treated at home. What was the agency which stamped out small-pox in Gloucester even whilst there were hundreds of centres of infection in the town and whilst there were still perhaps 35,000 people who had never had the disease? We shall soon see, but meantime some other questions call for attention.

As in Leicester, so in Gloucester, the hospital was a structure of wood, or wood and iron. In Leicester it was old and unsightly and had been unfavourably commented on from time to time by central and local public health officials without any sufficient result in the way of remedy. In Gloucester, however, the town council was not so lax and had added to its accommodation before the epidemic began and had forty-eight beds at its disposal to devote to small-pox. The recognised standard for infectious diseases in general, and not for a single disease, would have required only forty-two beds for Gloucester; besides, every small-pox case known of in Gloucester was removed to hospital on the very day of notification during the earlier months of the epidemic. In the face of these plain and undeniable facts it is yet alleged that insufficiency of hospital accommodation was a main factor in the Gloucester epidemic. So small was the hospital in the opinion of General Phelps, the president of the Anti-vaccination League, that he describes it as a "toy hospital." The *Vaccination Inquirer* says (July, 1896) "the hospital accommodation was from the first wretchedly inadequate, and the accounts of the patients being stowed three in a bed can no longer be denied." To an anti-vaccination meeting at Coventry Mr. (now Dr) Walter R. Hadwen stated that the accommodation at Gloucester was "totally inadequate" and that at one time two wards of eight beds each had had in them twenty-six children and eleven women, two beds having four children each in them. The place, he said, was a "miserable little hospital of forty-eight beds."

These quotations (and they could easily be multiplied) are of special interest at the present time. No doubt the hospital was overcrowded in the sense that it contained more than forty-eight cases at once. But this was the result simply of a strenuous endeavour by the Gloucester authorities to control small-pox by removing every case to hospital. If they had stopped taking cases when only forty-eight were in the wards it may be safely believed that they would have been blamed for not receiving more cases, and it could have been urged that a hundred cases or two hundred cases would have had more cubic space per head than in many an ordinary bedroom.

But what is adequate hospital accommodation for small-pox for a town in which vaccination has been neglected? Dr. Collins and Mr. Picton in their Statement of Dissent from the findings of the Royal Commission on Vaccination lay great stress on the necessity for "adequate accommodation." Mr. Alfred Milnes, M.A., explained to the people of Coventry that "they wanted adequate hospital accommodation outside the town permanently ready and compensation in full for loss of wages and property to those who consented to be quarantined." Never yet, however, has any anti-vaccinationist stated what he means by "adequate" accommodation. But we may gather from the above what amount of accommodation is *not* adequate. No place of 42,000 inhabitants is to look on forty-eight beds as constituting anything more than "a miserable little hospital," according to Mr. Hadwen, or a "toy" hospital, according to Major-General Phelps, and the *Vaccination Inquirer* declares (falsely, but that is *more suo*) that the sick were "huddled together in numbers four times too great for the hospital accommodation." It is apparent from the figures given above that during the earlier months of the outbreak nearly all cases were removed, and even in March the Sanitary Committee struggled hard to carry out the practice. Yet in April and May the cases of small-pox were 1337. That being so, would a hospital of 1337 beds have been accepted by anti-vaccinationists as "adequate" for a place of 42,000 inhabitants? Or, if rural populations could do with less, may we assume 1000 beds to be the proper average figure? If so, then for a population of thirty millions we would need 750,000 beds for small-pox, say in the United Kingdom. Now it is to be assumed that the best kind of accommodation should be provided, and this could hardly be done for less than £250 or £300 per bed. Let us, however, take the amount at only £200 per bed, and we get a capital cost of £150,000,000 for small-pox hospitals. But there is also the cost of maintenance and repair and of an army of nurses and medical men kept "in permanent readiness," and then there is to be compensation for wages for the quarantined, who under any complete scheme would be far more numerous than the patients. Then, too, there is compensation for all articles destroyed. The calculation need not be pursued. The dream of adequate small-pox hospital accommodation for an unvaccinated nation is a dream fit only for a bedlamite in the "exaltation" stage of his malady, believing himself to be possessed of the riches of Crœsus and the powers of the gods.

But there is another point that merits attention in connexion with the hospital. In his speech at Coventry Mr. Milnes laid it down as a necessity that a small-pox hospital should be "outside the town." In this declaration we have the unusual pleasure of being in hearty agreement with Mr. Milnes. Owing to aerial diffusion and other agencies a small-pox hospital inside a town is a danger to the community. And Mr. Walter R. Hadwen, in a speech at Reading on the Gloucester epidemic, is reported to have told his audience that "in the centre of the populous neighbourhood they built the small-pox hospital and kept on adding to it."[1] At Weston-super-Mare he said: "And where was this small-pox hospital situated? It was situated in a field, surrounded by a thickly-populated neighbourhood." This seems explicit enough. But what do we find on turning to the evidence of Mr. George Newman, the secretary to the local anti-vaccination society, as given before the Royal Commission on Vaccination? Regarding the hospital he was asked by Mr. Dugdale (Q. 18,236), "Is it in the town or outside?" and the reply came straight and clear, "It is outside the town."

The hospital was erected about 1874. Obviously if it was built or situated in a thickly populated neighbourhood in 1874, and if in 1891 it was "outside the town," then either the town must have withdrawn itself from the hospital or the hospital must have travelled to the outside of the town. These, however, are high questions which we leave to the judgment of those who care to tackle them. Turning to Dr. Coupland's report we seem to find that the facts were just the reverse—that the hospital was built outside the town and that the town came out and to some suburban extent approached or surrounded the hospital. Dr. Coupland says: "It will be seen from the annexed plans that the ground upon which the hospital stands has become considerably surrounded by dwellings since it was first opened. Many new roads have been formed or are in process of formation, the houses in them being for the most part semi-detached villas or short tiers of terraces. The ground that is still open and that is not taken up by the hospital site is used for allotments and pasturage." The situation of the Gloucester Hospital in this respect perhaps resembles that of the Leicester Hospital, as to which Dr Coupland reported, "When originally erected in 1870-71 it was well removed from inhabited dwellings, but within the past few years the adjoining district of Newfoundpool has been much built over." The total number of small-pox beds in proportion to the population was considerably greater in Gloucester than in Leicester and most of the accommodation was more modern. Gloucester, therefore, was on the whole better off than Leicester as regards isolation accommodation, and we have seen how for months every case was promptly removed. But in Gloucester small-pox reached an enormous prevalence and its hospital is denounced by Mr. Hadwen as being "totally inadequate," while in Leicester, he says, there was a "splendid system of isolation." The fact is that in Gloucester the epidemic went on after the hospital was full, while in Leicester the scarlet fever cases were sent to their homes in the town, being followed there by disasters on which we have already commented, while the small-pox epidemic stopped before the wards were overcrowded.

These criticisms as to the situation of the Gloucester Hospital are important in this respect, that they show that to satisfy opponents of vaccination it will be necessary to remove small-pox hospitals so far from towns and suburbs that there shall be no possible chance of even a villa or suburban population coming very near them and that if this unexpectedly should occur, then forthwith new hospital accommodation must be obtained at a greater distance. Now all this anti-vaccination argument about the situation of the Gloucester Hospital has no doubt served its purpose in helping to withdraw the minds of the people of Gloucester from the neglect of vaccination, which was the outstanding fact requiring their attention. But it is obvious that if Parliament is to be influenced in the direction of trying hospital accommodation as a substitute for vaccination it must not be frightened by the prospect of local authorities courting bankruptcy in their efforts to get sites and build hospitals of "adequate" size in places away from the populations they are intended to serve, and to build new hospitals whenever the population approaches the old ones, and to keep such hospitals staffed and in constant readiness. Therefore, the argument regarding the influence of the Gloucester hospital having served its purpose in helping to preserve anti-vaccination from reproach, we may now expect a change of attitude. Calling attention to Dr. Savill's Warrington report and to the opinion expressed there that aerial spread of small-pox from the hospital did not take place in Warrington, the *Vaccination Inquirer* says: "It is hardly necessary to point out the immense importance of this if it can be maintained .....; for clearly if small-pox is not conveyed by air current to considerable distances and can only be, as it were, passed on from hand to hand by a proximity approaching to actual contact, then as soon as a small-pox patient is removed by isolation to a certain distance from contact with his fellows, his ability to communicate small-pox ceases." Notwithstanding the handle made of the (alleged) situation of the Gloucester Hospital in a thickly populated neighbourhood we shall not be surprised if in Parliament some opponent of vaccination is put up to argue that the situation of small-pox hospitals is of so little consequence that there need be no difficulty in finding sites close to or in towns and yet harmless to the surrounding population. Such inconsistency would be as nothing compared with the glaring and

[1] Berkshire Chronicle, Oct 10th, 1893.

constant inconsistencies that seem to be part and parcel of the agitation against vaccination.

(To be continued.)

THE ROYAL COMMISSION ON THE METROPOLITAN WATER-SUPPLY.

THE twelfth meeting of the Commissioners was held in Committee Room A at the House of Lords on Monday, Feb. 21st. With the exception of Sir George Barclay Bruce all the Commissioners were present. The whole of the sitting was taken up with the examination of Mr. Gomme, statistical officer to the London County Council.

At the commencement of the proceedings the CHAIRMAN said that Mr. Pember had rather challenged some statements which had been made by Mr. de Bock Porter with regard to charges for water rents which were made by some of the metropolitan companies. A statement illustrating the statutory charges of the various companies as supplied to houses of rentals ranging from £10 to £50 per annum had therefore been made for the Commissioners. This table gives in the case of all the metropolitan companies a list of the amounts of water rents payable, showing how they vary with the rateable value of the houses and giving the extra charges which are made for high service, for baths, and for water-closets. The table gives also an explanation of the statutory meaning of high service as laid down in the Acts of the different water companies. In the case of the Chelsea Company high service means the delivery of water at an elevation of more than 10 ft. above the pavement in the front of the premises supplied. In the case of the Grand Junction and of the West Middlesex Companies it means a height of over 10 ft. above the footway or pavement. In the case of the New River Company it means any level above the ground floor. The New River Company is authorised to charge 1 per cent. on the annual value of any premises to which a supply is given at an elevation of more than 160 ft. above Trinity high-water mark and the West Middlesex Company is authorised to make the same charge for all supplies given at an elevation of more than 200 ft. above Trinity high-water mark. In the case of the Southwark and Vauxhall Company high service means a supply at a greater height than 10 ft. above the footway or pavement in front of the premises supplied. The East London Company is authorised to make an additional charge up to 25 per cent. for high service, which in the case of this company means any place 20 ft. above the level of the adjoining or nearest pavement. The Acts relating to the Lambeth and the Kent Companies contain no reference to extra charges for high service.

Mr. GOMME put in a table giving an account of the revenue and expenditure of the Glasgow Corporation Waterworks. From this table it appears that since the water-supply was taken over by the corporation a public water-rate has always been made in addition to the rent charged to individual consumers for the supply which they receive. With regard to the charges there was formerly some difference in that made to water consumers on the north and on the south of the River Clyde and those living outside the municipal area have always paid at an increased rate. The amount charged for domestic supply at the present time within the city limit is less than half the amount charged when the waterworks was taken over by the corporation.

Mr. Gomme was cross-examined by Mr. LITTLER, who represented the Kent Company. The witness and counsel did not agree with regard to the comparative sizes of houses obtainable at a given rental in the Kent district and in Birmingham.

With regard to the water-supply of Manchester a letter from the Town Clerk at Manchester was read in which it was stated that the sanitary authorities of that city pay the water department for the amount which they use for all sanitary purposes. There is in Manchester a rate of 3*d.* in aid of the water-supply. The only water for which payment is not made is that used for extinguishing fires and as in the case of London no payment is made for water so used. The public rate of 3*d.* yields a sum very nearly as great as the amount paid in water-rents by private consumers.

The CHAIRMAN pointed out that it seemed to him that the tables which had been presented by Mr. Gomme would be of little service. What the Commissioners wished to have and what he had asked for was an accurate statement of the accounts of the water companies before their purchase and a statement of the accounts after the undertakings had been bought by the various municipal authorities. If the money necessary for carrying out the water undertakings is paid for partly out of the rates and partly out of the rent paid by the water consumers, and if water for sanitary purposes is paid for by the sanitary authorities and the money is given to the water department, the money is simply taken out of the one pocket and put into another. "In no instance," the Chairman said to Mr. Gomme, "do you give us a complete case."

With regard to a table which had been put in by Mr. Gomme showing the different amount which was spent for public purposes at St. Olave's and Plumstead respectively for water used by the vestries Mr. Gomme was asked whether he could tell what was the area or measurement of the roads watered in the case of Plumstead. On this point the witness had no information.

Mr. LITTLER pointed out that the Plumstead roads amounted to over twenty-eight miles and suggested that the amount of water used was therefore necessarily much greater than that used in St. Olave's and that therefore the table put in by the witness was without value because unlike things were compared. Mr. Littler gave the witness a table comparing charges made for water at Bradford and by the Kent Company.

On behalf of the London County Council Mr. BALFOUR BROWNE objected to the table being put in till they were in a position to examine the compiler of the table.

More questions were also asked with regard to the contention that the witness had held at the previous sitting to the effect that the capital of the companies ought to be written down.

Lord ROBERT CECIL, on behalf of the Hertfordshire County Council, said that it had been shown by the evidence brought before the Commissioners that people who lived in the areas immediately outside provincial towns were often charged for water at a higher rate than those who lived within the boundaries of a city. He asked Mr. Gomme if he would prepare a table giving a list of the provincial towns which managed their own water-supply, arranged to show in what cases people living in the outlying parts paid (1) the same rates; and (2) higher rates; and if he would add a list of those places in which water was bought in bulk.

Mr. RICKARD, on behalf of the Chelsea Company, pointed out that dividends were paid on the statutory capital of the company and that the bonds to which reference had been made at a previous meeting did not receive the same rate of interest.

The CITY REMEMBRANCER wished to know in case of the purchase of the metropolitan water companies by the County Council what Mr. Gomme considered would be the correct method of finding out what amount ought to be paid for them. Would the estimate be based on the present income of the companies or would it be taken on the capital value of the works? If income were the basis of the estimate how many years' purchase would be allowed and did the County Council propose to give evidence on these matters? The witness could not give any information. He thought the stability of the income of the companies should be taken into account and that some figures which he had given before on this matter would be of use in that connexion.

In answer to further questions the witness said that he did not assist in preparing the memorandum which had been made by the Deputy Chairman of the County Council and published in the year 1896 and that it did not represent his views.

The CITY REMEMBRANCER pointed out that at the present time special arrangements were made by people in the City of London with the New River Company with regard to the amount which they should pay. If the water rents paid in the City of London were increased to equal those charged by the West Middlesex Company the citizens would pay much more for water than they did at present. With the exception of the West Middlesex Company the companies outside the City charged in most cases their full statutory prices for water supplied. If the water rents were reduced in the case of the other companies to the rate now charged by the West Middlesex Company the amount paid by the water consumers would be about £250,000 a year less than it is at present

and the City Remembrancer wished to know if the County Council took over the water-supply how would they make good this deficiency?

The witness suggested a special rate.

The CITY REMEMBRANCER did not think this would be an advantage to the City.

Mr. GOMME again suggested that they would get better water, but the CITY REMEMBRANCER had no complaint to make of that supplied to the City by the New River Company.

The CITY REMEMBRANCER asked the witness whether he had seen the Meter Bill promoted by the Corporation in 1884. The witness objected on principle to the supply of water by meter and thought by that means the poor would have to pay more; but the City Remembrancer pointed out that in this Bill that contingency was specially provided against, and the witness said that he was not acquainted with the provisions of the Bill. The CHAIRMAN could not understand why it was right and proper that water for trade purposes should be supplied by meter and why it was wrong and improper that domestic supplies should be charged for on the same principle.

Mr. GOMME, in reply, said that if water were supplied by meter less would be used for domestic purposes, which would be a disadvantage from a sanitary point of view.

With regard to the amount of capital represented by the water companies the witness pointed out that the official auditor had no right to determine whether the things represented by that capital were or were not obsolete.

With regard to the amount paid in the City of London for water the CITY REMEMBRANCER pointed out that in case of a new tenancy it was now usual for the tenant to arrange with the New River Company as to the amount which should be paid. In the case of a place like a bank which had a high rateable value less was charged by the company than in the case of an eating-house. He asked if the County Council were allowed to have control of the water-supply of London whether this arrangement would be carried on as it is at present. The witness said he thought the County Council would "take it into consideration," which, the CHAIRMAN said, meant nothing, while he pointed out that the witness had previously complained of the special arrangements which had been made in the west-end of London with the water companies by the owners of certain large properties.

The CITY REMEMBRANCER said it would be of great use if the witness would prepare a list of the statutory regulations which now existed as to the control of water and if he would give any suggestions he could with regard to additions which might be usefully made to the powers of control which at present existed.

The witness agreed to do this, but Mr. BALFOUR BROWNE, on behalf of the London County Council, pointed out that such suggestions must be looked upon as those of Mr. Gomme and not of the County Council.

The CHAIRMAN said he had noticed previously that when the matter of control of the water-supply was mentioned the representatives of the County Council "averted their faces," that they were opposed to control, and had no advice to give on it. Mr. Gomme had been the first witness who was prepared to render any assistance in the matter.

The next meeting will be held on Monday, Feb. 28th.

SOME BLOTS IN OUR SYSTEM OF SANITARY ADMINISTRATION.[1]

AFTER alluding to the recent epidemics of typhoid fever at Maidstone, King's Lynn, and Clifton Dr. Parkes remarked that it should not be lost sight of that the evil wrought by these epidemics is not always limited to the places of origin. Infection is certain to be imported into unaffected areas and the seeds sown for the subsequent development, should local circumstances permit, of an outbreak of a serious character. There was still far too much infectious disease in the country—not only typhoid fever, but also small pox, scarlet fever, diphtheria, measles, and whooping-cough. In dealing with Asiatic cholera alone had the country taken a great stride forward. Though the infection of this dreaded disease was introduced from the Continent in 1892, 1893, and 1894 at several places into this country, and even got some foothold at Grimsby in 1893, there was nothing in the nature of a general epidemic. In 1892 and again in 1894 there was no extension whatever from ship-borne cases into the country generally. In 1893 there were in all only 287 cases and 135 deaths, including the Grimsby cases. These good results in dealing with successive invasions of Asiatic cholera must be largely attributed to the fact that the necessary measures are not left entirely in the hands of local sanitary authorities. The Medical Department of the Local Government Board exercises a large measure of direction and control in concerting measures for the repression of Asiatic cholera and there is great wisdom in entrusting such large powers to a department of Government which is officered by experts and unaffected by local interests.

With regard to typhoid fever epidemics two points had been very clearly brought out by the Maidstone inquiry. The first was that there was great need for an authoritative exposition of the law on the subject of the legal liability of water companies and water authorities to supply pure and uncontaminated water to their consumers, the second being the urgent necessity for investing the officers of sanitary authorities with powers of inspection of the sources of supply and the works of storage, purification, and distribution of water supplied to the districts under their control. Country farms also supplying milk to urban districts should be open to inspection by the sanitary officers of those districts without the formality and delay caused by the necessity of obtaining a magistrate's order as required by existing Acts of Parliament. The medical officer of health should have power to order the discontinuance of a milk-supply which he had reason to regard as likely to cause infectious disease, the existing procedure by resolution of the sanitary authority being far too dilatory to properly protect the public health in emergencies of this nature.

Dr. Parkes then alluded to the failure of the Government to take any steps to prevent injury to the public health by the consumption of oysters from grossly sewage-polluted layings, although the report of the Local Government Board on the subject in 1895 had revealed a condition of things which surely demanded a prompt remedy. The lecturer deprecated also the inexcusable habit of successive Governments of hanging up all questions of improved sanitary administration by referring them to Royal Commissions, whose belated reports and recommendations appeared to carry little conviction to the minds of those in authority. This was especially true of tuberculosis and vaccination. Continental nations had now almost perfected their systems of meat inspection and of universal vaccination with glycerinated calf lymph, whilst this country was just beginning to awake to the necessity of following continental example. In conclusion Dr. Parkes referred to the power possessed by the Local Government Board under the Public Health Act, 1875, to compel defaulting local sanitary authorities to carry out the provisions of the Act and to the little use the Board had made of these powers. Hitherto the policy of the Board had been that of persuasion rather than of compulsion, but the public was now probably prepared for a rather stronger conception of its duty by the Government department entrusted with the supervision of the public health of the country.

[1] Abstract of an Introductory Address to a Course of Lectures and Demonstrations at the Sanitary Institute, by Louis Parkes, M.D. Lond., D.P.H., Medical Officer of Health of Chelsea.

THE ARMY MEDICAL DEPARTMENT REPORT FOR 1896.

FIRST NOTICE.

THE Army Medical Report for 1896, consisting of 321 pages, has just been issued. The covering letter to the report from the Director-General to the Secretary of State for War is dated Dec. 14th, 1897. There is no appendix consisting of contributions from members of the Medical Staff and others dealing with cases of professional and clinical interest and questions of hygiene in the present volume of the report. From the excellent introductory summary we glean that the average strength of European troops serving at home and abroad in 1896 was

203,145 warrant officers, non-commissioned officers, and men. Of this force there were 191 513 admissions into hospital and 1676 deaths. The ratios represented by those numbers are: for admissions to hospital 942·7 and the deaths 8 14 per 1000, the latter being calculated on a strength of 205 800, which includes detached men. There were also 53 European soldiers serving in West Africa, amongst whom there were 265 admissions into hospital and three deaths. The ratios of both sickness and mortality for the troops serving in the United Kingdom were lower than in 1895 and considerably below the average ratios for the preceding ten years. Enteric fever showed a decided decline in its admission and death rates as compared with those for the previous year and the average ratios for the past ten years. The station most affected in this respect was Dublin. The general health of the troops in the colonies was on the whole satisfactory. At Malta continued fevers were more prevalent than in 1895 and in Ceylon and China malarial fevers were the cause of a large amount of sickness, but much of this was attributed to the arrival of troops from malarial districts in India A considerable increase in the admission rate for venereal diseases in the West Indies is recorded and, as in the previous year, venereal disease shows excessive prevalence in China and the Straits Settlements. In India there was a decline in the admission-rate, but the ratio of constant inefficiency was fractionally higher than in the previous year. There was more sickness from enteric fever, other continued fevers, and cholera. Malarial fevers, whilst less prevalent than in 1895, accounted for almost one-fifth of the total number of admissions. With regard to venereal disease, there was a notable increase in the sickness from secondary syphilis, but a decline in the other forms of venereal disease. The total admissions for venereal diseases accounted for more than one-third of the admissions into hospitals. The general health of the troops in Egypt was good and the improvement noted in the reports for the two previous years still continued. Enteric fever and venereal diseases were, however, the cause of more sickness than in 1895, the increase in the former being mainly due to disease contracted "Up Nile" during the Dongola Expedition.

According to the statistical table giving the ratios per 1000 of strength of European troops in 1896 it would appear that the total mortality among the troops serving at home and abroad was 8·14. In the United Kingdom it was 3·58, in Canada 3·32, at Gibraltar 4 10, and in South Africa and St. Helena 4 76 per 1000 respectively, whereas in Egypt and Cyprus the mortality rate was 13 28 and in India 15·29. The tables from which these figures regarding the ratios of mortality per 1000 are taken also give the admission, invaliding, constantly non-effective sick-rates, together with the average sick-time per head and the average duration of each case of sickness. These have, of course, all to be taken into account as well as the mortality-rate. The tables furnished on the second and third pages of the report not only summarise the most important of these results of sickness in the various commands in which the troops were stationed during 1896, but they enable the reader to compare these with the results obtained during the preceding ten-year period. But we must defer any further consideration of the report for the present. In what we have written the wording of the report itself has been closely followed, for it would be difficult to set forth the facts more succinctly than its compilers have done.

REPORT OF BRIGADE-SURGEON-LIEUTENANT-COLONEL T. S. WEIR, THE MUNICIPAL HEALTH OFFICER OF BOMBAY, FOR 1896-97.

As we have said, the literature regarding the plague in India is already very extensive and it has not yet reached a finality, for the epidemic instead of having come to an end has unfortunately increased of late. The report of the health officer of Bombay naturally deals very fully, among the other and more common diseases, with plague. It is a voluminous and at the same time—for the terms are not by any means always convertible—able report. A detailed description is given of what is known about the origin and spread of the epidemic in Bombay and its causes, real and alleged.

Among the phenomena preceding the epidemic were (1) an abnormal rainfall both in that it was 15 in. above the average and was distributed over only some six weeks instead of four months; (2) an abnormally high level of sewage in part due to the main sewage outfall being blocked by a storm; (3) floods and as a sequence damp grain stored in or under buildings used for habitations; and (4) an abnormally high level of ground-water. In July, 1896, there was a sudden outbreak of foot and mouth disease and at the beginning of September four very suspicious deaths were notified but none had been attended by a medical man. At the end of September the first case of bubonic plague was publicly notified by Dr. Viegas. The first case reported in an European occurred on Nov. 12th, 1896. Three cases appear to have been imported direct from Suez. Brigade-Surgeon-Lieutenant-Colonel Weir gives the most graphic pictures of the terrible scenes encountered—of how dying and sick people were left locked up in rooms and deserted by everyone and of how the dead lay in the streets. He also points out the strange desire to wander away that so many patients had, it was noticed in all classes and often preceded high fever and delirium. This symptom if it occurred in the great plague of London is not mentioned by Boghurst, although in other matters his account might be that of the Bombay epidemic. A great mortality occurred among rats and very often the attacks among rats preceded those among human beings, so they served a useful purpose, for it was found that if the houses or places where dead rats were found were disinfected either only few or sometimes no cases occurred among human beings afterwards. Dr. Weir goes on to give a most interesting epitome of the subject of plague as treated by various writers, both ancient and modern, but curiously enough he only refers to Defoe in reference to the London epidemic of 1665 and omits the name of Boghurst, who was an eye witness. The difficulties which the authorities had in dealing with the people as to preventive measures were enormous, for they could not be made to understand how dangerous the disease was or why it should not be stayed as readily as cholera was. The most monstrous stories were spread abroad and, says Dr. Weir, "to such a pass had we come that picking up a few sick pigeons ..... nearly led to a riot."

As to measures taken to prevent the spread of the plague the following interesting account is given. On Oct. 30th, 1896, the Commissioner issued an order which provided that any person suffering from bubonic fever should be liable to be removed to hospital upon a properly signed certificate whether such person were provided with proper accommodation or lodging or not. This order created a great deal of ill feeling and many of the population declared that they would leave the city forthwith. They did not or would not understand that the disease was contagious and the hospitals were declared to be places for providing material for experiments and torture. In fact, this portion of the report reads as if it were written of Leicester or Gloucester or as if it embodied the views of the Society for the Protection of Hospital Patients. So, to avoid a general exodus which could not have been prevented—and this was a very real source of danger and one only averted by the greatest care and tact—the Commissioner issued another notice to the effect that no cases would be removed to hospital where proper segregation could be carried out at home. A plague committee was also formed, including members of all classes and religions, which drew up and issued a set of plain and simple rules for ventilating houses, admitting light, and urging people to inform the Municipality of all suspicious cases. The committee also erected segregation camps and urged the populace to use them, but they would not. Houses were disinfected by being thoroughly flushed with some disinfectant, generally one of the cresyl compounds, and afterwards limewashed throughout. As if the work and anxiety were not enough to try both mind and body, "charlatans from all parts of the world seemed to hover round like birds of prey"; one remedy strongly recommended was a pill made of pigeons' dung.

Dr. Weir goes on to mention the work of the various scientific missions. Both Dr. Bitter and Professor Gaffky came to the conclusion that the plague bacillus in the simple bubonic form of plague was never to be found in the excreta of patients. Wilm, however, in his report upon the Hong-Kong epidemic, considered that infection could be conveyed by excreta. Mr. Hankin never found the microbe in grain

whether clean or dirty; in his experiments as to the resisting power of the microbe he found it very sensitive to the action of weak organic acids, a prophylactic largely used by our forefathers, and also to oxydising agents. As to the results of M. Haffkine's inoculation they are as follows. There were in all from Jan. 10th to March 5th, 1897, 2156 persons inoculated. Excluding three persons who were attacked with plague on the day of inoculation and therefore infected previously there were only four attacks and no deaths among the inoculated. If no protection had been afforded the number of deaths should have been on the calculation of the average plague mortality figures from fourteen to sixteen. Dr. Weir gives a table showing the extent of overcrowding and the enormous size of the houses in Mandvi, and on looking at this one can only wonder that the incidence of the plague was not far worse than it was. For instance, one house had seventy rooms and a total population of 350; another house had 116 rooms and 740 people in them. But yet this district had a mortality rate of only 8·25 per 1000 despite the density of population, and this favourable result is doubtless due to the energetic measures taken for cleansing houses and infected sites.

We have not space to enter as we should like to do into all the details of this able report. It must suffice to say that it will be indispensable to the students of plague in the future, that every conceivable subject with a bearing on the epidemic is dealt with, and that modestly hidden among its pages are accounts of deeds of heroism and of uncomplaining attention to duty among all classes, both British and Asiatic, and among both men and women. Everyone, from the senior medical officer down to the grave-diggers, seems to have been animated with a desire to do his best.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6430 births and 4384 deaths were registered during the week ending Feb. 19th. The annual rate of mortality in these towns, which had increased in the three preceding weeks from 18·7 to 20·7 per 1000, declined last week to 20·4. In London the rate was 21·5 per 1000, while it averaged 19·6 in the thirty-two provincial towns. The lowest rates in these towns were 14·5 in Blackburn, 14·9 in Sunderland, 15·2 in Burnley, and 15·5 in Oldham; and the highest rates were 23·4 in Liverpool, 24·5 in Bristol, 25·0 in Swansea, and 29·0 in Wolverhampton. The 4384 deaths included 464 which were referred to the principal zymotic diseases, against 453 and 497 in the two preceding weeks; of these, 189 resulted from measles, 108 from whooping-cough, 71 from diphtheria, 34 from "fever" (principally enteric), 33 from diarrhœa, and 29 from scarlet fever. No death from any of these diseases was recorded last week in Norwich; in the other towns they caused the lowest death-rates in Plymouth, Preston, Bradford, and Sunderland, and the highest rates in Bristol, Swansea, Leicester, and Salford. The greatest mortality from measles occurred in London, Brighton, Gateshead, Leicester, Bristol, and Swansea; from whooping-cough in Birmingham, Salford, and Portsmouth; and from "fever" in Derby. The mortality from scarlet fever showed no marked excess in any of the large towns. The 71 deaths from diphtheria included 33 in London, 7 in Cardiff, 6 in Liverpool, 4 in Wolverhampton, and 3 each in West Ham, Bristol, and Salford. No fatal case of small-pox was registered during last week either in London or in any of the large provincial towns; and no small-pox patients were under treatment in any of the Metropolitan Asylum Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of last week was 2781, against 3061, 2961, and 2871 on the three preceding Saturdays; 233 new cases were admitted during the week, against 241, 209, and 232 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 471 and 463 in the two preceding weeks, further declined to 437 last week, and were 41 below the corrected average. The causes of 60, or 1·4 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Nottingham, Salford, Bradford, and in eleven other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Liverpool, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the three preceding weeks from 17·4 to 20·1 per 1000, declined again to 20·4 during the week ending Feb. 19th, and corresponded with the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14·3 in Leith and 17·4 in Aberdeen to 24·1 in Paisley and 26·4 in Greenock. The 614 deaths in these towns included 25 which were referred to whooping-cough, 22 to diarrhœa, 15 to measles, 12 to scarlet fever, 9 to "fever," and 7 to diphtheria. In all, 90 deaths resulted from these principal zymotic diseases, against 66 and 72 in the two preceding weeks. These 90 deaths were equal to an annual rate of 3·0 per 1000, which was 0·8 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had been 21 in each of the two preceding weeks, rose to 25 last week, of which 13 occurred in Glasgow, 5 in Paisley, and 4 in Edinburgh. The 15 deaths from measles showed a further increase upon those recorded in recent weekly numbers, and included 13 in Glasgow. The fatal cases of scarlet fever, which had been 6 in each of the two preceding weeks, rose to 12 last week, of which 5 occurred in Glasgow, 3 in Dundee, and 2 in Edinburgh. The 9 deaths referred to different forms of "fever" showed a further increase upon the numbers recorded in recent weeks and included 5 in Glasgow. Of the 7 fatal cases of diphtheria 2 were registered in Edinburgh, 2 in Aberdeen, and 2 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 117 and 126 in the two preceding weeks, declined to 91 last week, and were less than half the number in the corresponding period of last year. The causes of 29, or nearly 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had increased in the three preceding weeks from 28·9 to 34·9 per 1000, declined again to 28·5 during the week ending Feb. 19th. During the past seven weeks of the current quarter the death-rate in the city has averaged 31·6 per 1000, the rate during the same period being 22·1 in London and 18·8 in Edinburgh. The 191 deaths registered in Dublin during the week under notice showed a decline of 43 from the number in the preceding week, and included 11 which were referred to the principal zymotic diseases, against 14 and 17 in the two preceding weeks; of these, 4 resulted from "fever," 2 from whooping-cough, 2 from scarlet fever, 2 from diarrhœa, 1 from diphtheria, but not one either from measles or small-pox. These 11 deaths were equal to an annual rate of 1·6 per 1000, the zymotic death-rate during the same period being 2·4 in London and 2·3 in Edinburgh. The deaths referred to different forms of "fever," which had been 7 in each of the two preceding weeks, declined to 4 last week. The 2 fatal cases of whooping-cough corresponded with the number recorded in the preceding week. The deaths from scarlet fever, which had been 2 and 3 in the two preceding weeks, declined again to 2 last week. The 191 deaths in Dublin last week included 28 of infants under one year of age, and 58 of persons aged upwards of sixty years; the deaths of infants showed a further decline from recent weekly numbers, while those of elderly persons showed a slight further increase. Five inquest cases and 5 deaths from violence were registered; and 62, or nearly a third, of the deaths occurred in public institutions. The causes of 11, or nearly 6 per cent., of the deaths in the city last week were not certified.

ROYAL EAR HOSPITAL, SOHO, W.—The Earl of Dartmouth, who presided on Feb. 15th at the eighty-first annual meeting of the Royal Ear Hospital, said that in view of the increase in the number of patients it was necessary to acquire more commodious premises. His lordship stated that the committee had acquired a suitable site in Dean-street, Shaftesbury-avenue, and that plans were in course of preparation for a building specially adapted for the treatment of aural complaints and fitted with the most approved appliances

THE SERVICES.

NAVAL MEDICAL SERVICE.

STAFF-SURGEON GEORGE WARNER BELL has been promoted to the rank of Fleet-Surgeon. The following Surgeons have been promoted to the rank of Staff-Surgeon:—Frederick Walter Stericker, William Wenmoth Pryn, Graham Egerton Kennedy, Jerome Barry, Alfred John Pickthorn, John Andrews, Henry John Hadden, Vidal Gunson Thorpe, and Edward Henry Meaden.

ARMY MEDICAL STAFF.

The under-mentioned Surgeon-Majors to be Surgeon-Lieutenant-Colonels:—William Keays, Robert T. Beamish, Walter A. Parker, James Anderson, Jules I. Routh, Henry Grier, Hugh L. Donovan, Nicholas Leader, James Tidbury, Allan A. Lyle, Henry A. H. Charlton, and Percy G. R. Young. The undermentioned Surgeon-Lieutenant-Colonels retire on retired pay:—Walter A. Parker, Hugh L. Donovan, Allan A. Lyle, and Henry A. H. Charlton. Brigade-Surgeon-Lieutenant-Colonel Mackinnon, D.S.O., has assumed recruiting duties at St. George's Barracks, *vice* Surgeon-Major Parker, who is appointed to the Medical Charge of the 49th Regimental District at Reading.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Captain Davidson, on transfer from Multan, is placed on special duty in the Jullundur District, vice Surgeon-Major Nicholson. The services of Surgeon-Major Clarke (Bengal) are placed permanently at the disposal of the Government of the Punjab.

VOLUNTEER CORPS.

Artillery: 1st Ayrshire and Galloway: Thomas Harper, M.B., to be Surgeon-Lieutenant. *Rifle:* 4th Volunteer Battalion the King's (Liverpool Regiment): Brigade-Surgeon-Lieutenant-Colonel T. M. Wills resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the battalion on his retirement, vacating at the same time his appointment as Senior Medical Officer to the Mersey Volunteer Infantry Brigade. 1st Volunteer Battalion the Lincolnshire Regiment: Surgeon-Captain F. J. Walker, M.D., to be Surgeon-Major. 3rd (Cambridgeshire) Volunteer Battalion the Suffolk Regiment: The under-mentioned gentlemen to be Surgeon-Lieutenants:—Alfredo Antunes Kanthack, M.D., and Ernest Lloyd Jones, M.D. 3rd Volunteer Battalion the Cheshire Regiment: Surgeon-Lieutenant Edward John Sidebotham resigns his commission and is appointed Captain. 4th Volunteer Battalion the South Wales Borderers: Henry Charles Groves to be Surgeon-Lieutenant. 3rd Volunteer Battalion the Welsh Regiment: Surgeon-Lieutenant-Colonel J. L. Leckie resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the battalion on his retirement. 1st Bucks: Charles John Deyns to be Surgeon-Lieutenant.

VOLUNTEER MEDICAL STAFF CORPS.

The London Companies: Surgeon-Lieutenant J. R. Whait, M.B., to be Surgeon-Captain.

MEDICAL STATISTICS OF THE DUTCH NAVY IN 1895.

The following items are extracted from the latest annual report issued by the Sanitary Department of the Dutch Navy:—1. War vessels stationed in home waters: strength 4467 men. Admissions to hospital, 983 per 1000; deaths from disease, 2·4 per 1000; violent deaths (suicide and accident), 0·7 per 1000; chief causes of mortality, pulmonary tuberculosis and pneumonia. 2. Force living on shore: strength 624 men. Admissions to hospital, 1400 per 1000; deaths from disease, 6·4 per 1000; violent deaths, 3·2 per 1000; chief cause of mortality, pulmonary tuberculosis. 3. War vessels on special service: strength 715 men. Admissions to hospital, 1670 per 1000; deaths from disease, 2·8 per 1000; violent deaths, 1·3 per 1000. 4 War vessels stationed in the East Indies: strength (Europeans) 2744 men. Admissions to hospital, 1690 per 1000; deaths from disease, 5·8 per 1000; violent deaths, 1·8 per 1000; chief causes of mortality, pernicious fever, remittent fever, enteric fever, hepatitis, and beri-beri. Number of men invalided to Holland 111·5 per 1000, the cause in 23·5 per cent. of the cases being beri-beri and in 16·6 per cent. malaria. Natives: strength, 1117 men. Admissions to hospital, 1430 per 1000; deaths from disease, 47·5 per 1000, 66·0 per cent. of the native mortality being due to beri-beri and 12·5 per cent. to cardiac paralysis and debility. In 14·2 per cent. of the deaths the cause was unascertained. Loss by invaliding, 180·1 per 1000, mainly through beri-beri. 5. War vessels stationed in the West Indies: strength 228 men. Admissions to hospital, 2890 per 1000; deaths from disease, 21·9 per 1000. Three deaths out of five, being 60 per cent. of the total mortality, took place at Curaçao from yellow fever. Among the men on home service venereal affections were responsible for nearly 170 admissions per 1000 of strength, while on the East Indian station the ratio of disability from this cause was 365 per 1000 for Europeans and 282 per 1000 for natives.

THE VOLUNTEER OFFICERS' DECORATION.

The Queen has conferred the Volunteer Officers' Decoration upon the under-mentioned officers of the Volunteer Force:—*North-Eastern District: Rifle:* 2nd Volunteer Battalion the East Yorkshire Regiment: Surgeon-Lieutenant-Colonel William Stephenson. 1st Volunteer Battalion the King's Own (Yorkshire Light Infantry): Surgeon-Captain Robert Blair, M.D. Edin. *North-Western District: Artillery:* 4th Lancashire Volunteer Artillery: Surgeon-Lieutenant-Colonel Thomas Frederic Young, M.D. Durh. *Rifle:* 4th Volunteer Battalion the King's (Liverpool Regiment): Surgeon-Lieutenant-Colonel William John Fleetwood, M.D. St. And. 2nd Volunteer Battalion the King's (Shropshire Light Infantry): Surgeon-Major Robert de la Poer Beresford, M.D. Glasg. *Western District: Rifle:* 3rd Volunteer Battalion the Welsh Regiment: Surgeon-Lieutenant-Colonel John Lindsay Leckie. *Home District: Rifle:* 21st Middlesex (The Finsbury) Volunteer Rifle Corps: Surgeon-Lieutenant-Colonel John Adams. *Scottish District: Rifle:* 5th (Perthshire Highland) Volunteer Battalion the Black Watch (Royal Highlanders): Surgeon-Lieutenant-Colonel John Mackay, M.B. Aberd.

DEATHS IN THE SERVICES.

Surgeon-Captain Arthur James Lattey, A.M.S., at Calcutta on Jan. 3rd, aged twenty-eight years. The deceased entered the Army Medical Staff as Surgeon-Lieutenant on July 29th, 1893, and was promoted to the rank of Surgeon-Captain in July, 1896.

Hon. Deputy Surgeon-General Alexander Maclean, A.M.S. (retired), at Thurso, at the age of sixty-six years. He received an appointment as Assistant Surgeon in 1854, and on the outbreak of the Crimean War he accompanied the Highland Brigade to the East, being attached to the 42nd Royal Highlanders (the Black Watch), and was at the battle of Balaclava and throughout the seige and fall of Sebastopol (medal with two clasps and Turkish medal). During the Indian Mutiny he was present at many of the engagements fought by Lord Clyde.

THE INDIAN FRONTIER.

We stated last week that notwithstanding the fact that the advantages so far gained by the frontier campaign had not apparently been commensurate with the cost and loss of life, it was nevertheless a mistake to suppose that the power of the Afridis had not been very materially weakened if it had not been altogether broken. The latest news is of a more hopeful character. Sir William Lockhart has been visiting the Khyber pass. The Malikdin Khels have paid their fines of rupees and rifles and it is regarded as highly probable that the other tribesmen will follow their example rather than face the spring campaign with which they have been threatened.

ENTERIC FEVER AMONG THE TROOPS IN THE KHYBER.

It is astonishing how enteric fever follows in the footsteps, as it were, of European troops in India. We learn from the *Pioneer Mail* of the 4th inst. that this disease has broken out at Jamrud and Landi Kotal in the Khyber Pass. The water-supply at Jamrud is said to be unsatisfactory owing to the vicinity of native villages.

WOUNDED FROM INDIA.

The recently arrived transport *Dunera* from Bombay brought forty invalids to Netley in addition to a large number of time-expired men and other soldiers.

Over fifty cases of scarlet fever and measles have been removed from Her Majesty's Training Ship *Impregnable* at Devonport.

Correspondence.

"Audi alteram partem."

"THE MIDWIVES REGISTRATION BILL."

To the Editors of THE LANCET.

SIRS,—I have read your leading article on the Midwives Bill with surprise and keen regret. Your statement as to the necessity for legislation puts the matter so clearly and so definitely that it is with something of a shock that one finds at the end of it all a declaration of hostility. The Bill must indeed be a bad one if it is so entirely beyond the reach of amendment as to merit no treatment short of absolute rejection. It is of course easy to say, Better no Act than a bad one. Is it not, however, for those who disagree with its provisions to put their views clearly before Parliament and to leave the question to its decision rather than to incur the responsibility of causing further delay in a matter in which delay means the sacrifice of many lives and exposure to much unnecessary suffering? I appeal to you, Sirs, now that there has occurred the first real chance of legislation, to assist in making that measure as perfect as possible and not to handicap it by inciting the profession to active opposition. If allowed to pass the second reading, it can be amended to any extent in the later stages. It will be a standing disgrace to us as a profession if, with our present chances, we do not secure the passing of this or some similar Bill during the present session of Parliament.

I will not enter into a lengthy criticism of the reasons why you object to our Bill, but I desire to point out that the rules under which it is proposed to place the practice of midwives have to be approved by the General Council of Medical Education. Such a body could not permit a midwife to undertake work for which it has itself imposed a different standard of knowledge. If it did so it would soon cease to exist. This, I venture to state, at once disposes of your contention that a midwife may under our Bill usurp the functions of the medical profession by undertaking what is strictly its work. Surely this provision must be considered to be something more than "a hint" as to the line which is to be drawn between a midwife's and a medical practitioner's duties, and therefore it should prove a sufficient safeguard against such usurpation.

I am, Sirs, yours faithfully,

ROWLAND HUMPHREYS
Hon. Sec. Midwives Bill Committee.

Buckingham-street, Strand, W.C., Feb. 19th, 1898.

To the Editors of THE LANCET.

SIRS,—The promoters of the Midwives Registration Bill have no reason to complain of the tone of the temperate and, indeed, encouraging article in THE LANCET of Feb. 19th, which, in its frank recognition of the fact (reported to the House of Commons by Select Committees in 1892 and 1893) that the present system, or rather want of system, is one that requires a remedy, shows a distinct advance both in public and professional opinion. But while welcoming that friendly criticism which the recognised organ of the medical profession is most justly entitled to bestow upon the Bill, and believing that the profession is sincerely desirous of coöperating with us in making it a good Bill, a workable one, and one which will prevent the deaths and mitigate the sufferings of the existence of which every medical man has experience, I should like very briefly to refer to a point which we admit to be a most important one and which, we think, we have dealt with in the Bill in a manner which should be at least satisfactory to the profession, but upon which apparently your main objection to it is founded. What will be under the Bill the limits of the registered midwife's sphere of action?

In the first place it will be as well to bear in mind that under present conditions the sphere of action of the unregistered midwife is only limited by the vigilance of the coroner and by a more or less remote possibility of a prosecution for manslaughter—a condition of things which could hardly be altered for the worse, so far at least as the patient is concerned. But the Bill proposes a statutory limitation by Clause 3 (4) which runs thus: "The certificate of registration under this Act shall not confer upon any woman any right or title to be registered under the Medical Acts in respect of such certificate or to assume any name, title, or designation implying that she is by law recognised as a licentiate or practitioner in medicine or surgery or that she is qualified to grant any medical certificate or any certificate of the cause of death." And, further, the rules which under a later clause in the Bill are to be framed by the Midwives' Board for "regulating, supervising, and restricting within due limits the practice of midwives" are to be approved by the General Medical Council, who surely may be trusted to act alike in the interests of the profession and the public and who will approach the consideration of the subject with an amount of technical knowledge and practical experience which Parliament cannot possibly lay claim to.

No one who has any knowledge of Parliamentary proceedings, especially in committee, would desire to see details of this character settled by Parliament, and settled in such a manner that only an amending Act could repair mistakes or make good omissions, when the rules dealing with them might be framed in the first instance by a board the majority of which would be registered medical practitioners appointed, not by "councils of corporations and public bodies," whether in coöperation with the Privy Council or not, but by the Royal College of Physicians of London, the Royal College of Surgeons of England, the Society of Apothecaries, and the Incorporated Midwives Institute, rules which would be approved and settled by the General Medical Council, which represents 'the vote of the medical profession" as far as any human institution can.

I know not, Sirs, what other public body can be named which is less likely to be "at fault over practical points when attempting to decide upon the precise relations that should exist between general practitioners and persons who are to work under them," but I can assure you that if you can suggest any the promoters of the Bill will be thankful for your assistance and guidance.

But I trust that I have made this point clear and that your readers will agree with me that the General Medical Council is more likely to devise a satisfactory definition of the sphere of the registered midwife's duties than the House of Commons sitting in committee; and as this letter is already longer than I had wished or anticipated I will only refer to one other point—the admission to the register of existing midwives, on which it is sufficient at present to say that under the Bill their admission will also be regulated by rules to be approved by the General Medical Council, after they have been passed by the proposed Midwives' Board.

It seems to me, Sirs, that the main point at issue between us is whether the working plans of a measure the necessity of which is admitted should be elaborated by a board mainly composed of medical men appointed by the leading medical societies and approved by the General Medical Council with a power of revision from time to time where experience shows that revision is desirable, or whether they should be settled once for all in the rough and tumble of a Parliamentary committee on a private member's Bill, and medical men must have much more faith in the wisdom and business capacity of Parliament than I have if they entertain any doubt as to which is the more excellent way, or which is the manner in which the public welfare is most likely to be attained.

I am, Sirs, yours faithfully,

House of Commons, Feb. 24th, 1898. J. H. JOHNSTONE.

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND AND MEDICAL AID ASSOCIATIONS.

To the Editors of THE LANCET.

SIRS,—Will you allow me to draw the attention of your readers to the following enigmatical proceedings of the Council of the Royal College of Surgeons of England on the subject of medical aid associations?

At the annual general meeting in November, 1897, I moved the following resolution, which was carried *nem. con.*:—

That this meeting, in view of the widespread public and professional evils induced by "medical aid associations" and other companies trading in medical attendance, calls upon the Council to make a clear pronouncement for the information of Fellows and Members that the acting as paid servants of any persons who tout and canvass for patients, or who allow the well-to-do classes to take advantage of rates of payment arranged to meet the necessities of the poor, is "disgraceful in a professional respect" and deserving of censure.

In December the Council, in pursuance of its usual practice of negativing everything desired by the Members, passed the following:—

That the mover and seconder of the third resolution be informed that the Council are not prepared to make a general pronouncement respecting the connexion of Fellows and Members of the College with medical aid associations, but are willing to consider evidence which may be submitted to them respecting the connexion of any individual Fellow or Member with an association which canvasses for patients to the injury of private practitioners and allows the well-to-do classes to take advantage of rates of payment arranged to meet the necessities of the poor.

On Jan. 13th, 1898, I was informed by letter that this resolution had not been confirmed and was still under the consideration of the Council. On Feb. 10th the Council determined not to confirm the resolution adopted on Dec. 9th, 1897, but adopted the following in its place:—

That the mover of the second and third resolutions carried at the annual meeting of Fellows and Members be informed that on June 10th, 1897, the Council passed a resolution to the effect that they were willing to consider any evidence which might be submitted to them respecting canvassing for patients directly or indirectly by any individual Fellow or Member of the College, with a view of determining whether or not such Fellow or Member has been guilty of a breach of the by-laws. To this resolution the Council adhere, but in their opinion, whilst so many different and dissimilar institutions are included under the denomination of "medical aid associations," many of them, such as the friendly societies, being legalised institutions, the Council cannot make any general pronouncement respecting the connexion of medical men with these associations.

Now, Sirs, what any plain man would like to discover is the difference between the resolution which the Council refused to confirm in January and that which it passed in February. The only distinction which I can see is that in the latter the Council gives an extremely feeble and fatuous reason why it will not make the pronouncement asked for. The Council apparently imagines that friendly societies or other "legalised institutions" are at liberty to advertise, tout, or canvass for members with impunity to their medical officers. Does it not know that some of the worst offenders are the amalgamated friendly societies in various parts of the country and such "legalised institutions" as the London and Manchester and the Victoria and Liverpool Insurance Companies? This is just another example of the ignorance shown by the Council concerning the interests of those whom it repeatedly asserts that it represents. It was asked, as one of the chief ethical authorities of the profession, to condemn the practices of advertising and canvassing now being largely carried on by employers of medical men; it endeavours to evade this obvious duty because some of these employers happen to be legalised institutions. It could make a "general pronouncement" in 1883 condemning the connexion of Fellows and Members with "trading institutions for the treatment of disease," such as the Harness Belt Company, because the Members—whom it represents—expressed no anxiety about the matter, but it cannot in 1897 publicly condemn a far worse evil because Fellows and Members in all parts of the country have asked it to do so. One of the members of the Council has said that "anything more disgraceful than this commercial compact with medical aid associations it would be difficult to imagine." Until the Council makes the pronouncement so frequently asked for I shall repeat what I said at the annual meeting—that it has tacitly but deliberately sanctioned this disgrace to our profession.

I am, Sirs, yours faithfully,

Feb. 22nd, 1898. W. G. DICKINSON.

HOSPITAL REFORM.

To the Editors of THE LANCET.

SIRS,—I beg to send you a copy of the recommendations as amended by the committee of the Hospital Reform Association.

RECOMMENDATIONS.

1. That in the casualty department of the general hospitals only cases of urgent importance should be attended to.

2. That in the out-patient department patients bringing notes from medical men should have *ceteris paribus* a prior claim to treatment. That a resident physician should be appointed whose duty it shall be to see all out-patients in the first instance and select those that require immediate treatment and decide which do not require hospital treatment. That after patients have received "first aid" their circumstances shall be inquired into by a competent officer. That the honorary medical officers shall not be required to treat more than twenty new cases at one sitting.

3. That the circumstances of all in-patients, with the exception of cases of accident, &c., should be carefully inquired into before admission.

4. That in the case of well-to-do people who are admitted to hospitals in consequence of accidents, &c., the hospitals should have the power at their discretion of recovering adequate fees for attendance.

5. In the case of small provincial hospitals that the plan adopted at the Oldham and Dorchester Infirmaries be recommended for trial.

6. That both in the large general hospitals and in the smaller ones out patients coming from outside districts should be requested to bring notes from medical men before being treated.

7. In the case of special hospitals (*a*) that payments by patients should cease; (*b*) that the eligibility for free treatment should largely depend on the recommendation of private practitioners; and (*c*) that some provision should be made outside the hospitals for people who are in a position to pay a reduced fee but are not in a position to pay the ordinary fee of specialists.

I only have to add that the association will gladly welcome any criticism that members of the profession may think proper to make. It is quite evident that hospital managers will have to take some practical steps to reduce the amounts now expended in the working of the casualty and out-patient departments, and it is to be sincerely hoped that they will not be induced to adopt the objectionable system of payments by patients as a remedy. The charging of a fee of a few pence for medicines and appliances will be certain to increase the amount of abuse and will also inevitably tend towards increasing the number of cheap dispensaries.

I am, Sirs, yours faithfully,

Cardiff, Feb. 19th, 1898. T. GARRETT HORDER.

"INTRODUCTION TO THE STUDY OF ORGANIC CHEMISTRY."

To the Editors of THE LANCET.

SIRS,—In the notice of my book, "Introduction to the Study of Organic Chemistry" in THE LANCET of Feb. 12th your reviewer asks: "Would five lines on the preparation of the important substance ethylene dibromide enable a first M.B. student to prepare the compound?" As a matter of fact the preparation in question is fully described in the text (p. 103) and the five lines referred to (p. 422) are merely notes dealing with details of quantity and manipulation not essential to the understanding of the subject. It is specifically stated at the commencement of these laboratory notes (p. 411) that they are to be *taken in conjunction with the text* and not independently. May I ask you in fairness to insert this correction in an early issue of THE LANCET? Thanking you for your otherwise complimentary notice,

I am, Sirs, yours faithfully,

JOHN WADE.

Medical School, Guy's Hospital, S.E., Feb. 15th, 1898.

"DR. CLIFFORD ALLBUTT'S 'SYSTEM OF MEDICINE.'"

To the Editors of THE LANCET.

SIRS,—I have brought the letters in THE LANCET of Feb. 5th and 19th concerning a reissue of the articles on Tropical Disease in my "System of Medicine" as a separate volume before Messrs. Macmillan. They regard the proposal as one which may well occupy their attention early next year. During this year our attention must be wholly directed to the completion of the work. The fifth volume would have been in the hands of the profession at the beginning of this year had it not been for the grievous delay of one contributor who has kept the fifth volume at a standstill for some months at too late a stage for his place to be supplied.

I am, Sirs, yours faithfully,

T. CLIFFORD ALLBUTT.

St. Radegund's, Cambridge, Feb. 18th, 1898.

"HYSTERICAL ISCHURIA: VICARIOUS ELIMINATION OF UREA."

To the Editors of THE LANCET.

SIRS,—The annotation in THE LANCET of Feb. 19th on the vicarious excretion of urea reminds me of a case under the care of the late Mr. J. Marshall in University College Hospital when I was house surgeon there in 1864. I regret that I cannot give more than an outline of the case, as I gave the notes I then made to Mr. Marshall and of course these are not now available. The case was one of amputation of the lower extremity, either the thigh or leg, I am not quite sure which. After the operation the patient had suppression of urine three times, each occasion being marked by the vomiting of large quantities of clear fluid.

This stopped as soon as the secretion was re-established. The fluid was not actually analysed, but the addition of nitric acid produced a copious deposit of large transparent crystals. I am, Sirs, yours faithfully,

Burton-on-Trent, Feb. 19th, 1898. PHILIP B. MASON.

A RARE TRANSPOSITION.

To the Editors of THE LANCET.

SIRS,—On opening the thorax in a post-mortem examination last week I found the heart was situated on the right side. There was no other viscus out of the normal position nor any sign of disease to account for this extremely rare condition. I have met with records of transposition of both heart and liver, but never before of the heart only.

I am, Sirs, yours faithfully,

Leeds, Feb. 22nd, 1898. W. H. BROWN.

AN EXPLANATION REQUIRED.

To the Editors of THE LANCET.

SIRS,—It would be extremely interesting to many of your readers if some intelligible explanation of the differential treatment of volunteer medical officers from volunteer *combatant* officers were forthcoming. On the day of the Jubilee at certain parts of the procession volunteers were stationed to line the route. Upon the same occasion numbers of volunteer medical officers were invited by the army medical authorities to give their professional services that day; they had to be at their posts at 8 A.M. and were then inspected by army medical officers and had to remain until after the procession had passed. Their names were subsequently sent in by the P.M.O. of the Home District to the military authorities with a recommendation that the Jubilee medal should be conferred on such medical officers. And now the mystery occurs. The combatant volunteer officers who lined the route have been decorated, but the volunteer medical officers who really did some work on that auspicious occasion have been refused the coveted honour. Why this slight? And upon what grounds has this medal been conferred on the officers of the St John Ambulance Association and not on the officers of the volunteer medical service? Perhaps a little assistance from THE LANCET will cause the removal of the injustice.

I am, Sirs, yours faithfully,

Feb. 16th, 1898. V. M. S.

JERRY-BUILDING AT BELFAST.

(FROM OUR SPECIAL COMMISSIONER.)

(*Continued from p. 540.*)

CROSSING the river Lagan, I now visited some of the streets off the Newtownards-road, one of the districts which has suffered most from typhoid fever. Entering a house where there had been a case of typhoid fever, I was told that the drain had been stopped up for six weeks. In spite of complaints, nothing was done till after a man had been taken ill with the fever, and then only was the drain repaired. This house consisted of four rooms, two upstairs and two on the ground floor; the back ground floor room being utilised as a bedroom. The bed was close to the stopped-up drain. Here seven children and their parents, nine persons in all, lived together. In a similar house, opposite, where there had also been a case of typhoid fever, the back ground floor room was a small scullery which had been converted into a bedroom. In the small back yard there were an open ash-pit and privy and a pigsty. The filth from the pigs and the privy had to be carried through the house to the street, and the back bedroom was so small that it would be difficult to pass through without soiling the bed with the manure, &c., as it was carried out. The window of the bedroom above and the scullery window opened immediately upon the pigsty and the privy, and as the yard was on a higher level than the floor of the house the subsoil waters would flow from the yard to the house. The arrangements of the house next door were disposed in the same manner, only the percolating of liquid manure through the wall into the house could be seen more distinctly.

Crossing back over the river, this time by the Albert Bridge, and visiting the district between this point and Ormeau-avenue, I came to a street where many costermongers live. The manner in which the vegetables sold by the costermongers are stored suggests how important it is that they should be very carefully boiled and shows what risks are attached to vegetables that are eaten raw—such as salads, celery, &c. Thus in one house I found that a sort of hutch had been constructed with boards in the small back yard close to a drain badly protected by a bell-trap and by the side of an uncovered ashpit and privy. The vegetables were kept in this hutch. The contents of the privy had to be carried through the house and the ground on which the vegetables were thrown must frequently be soiled with fæcal matter. In a house opposite the open ashpit and privy were full of black stinking water. On putting a stick in the uncovered ashpit to measure the depth of the water, which was about a foot, so foul an odour resulted that it was necessary to beat a hasty retreat. This accumulation of water was due to leakage through the wall of a stable on the other side of the yard. It was easy to see the foul water coming through the stable wall which formed the back wall of the yard. The yard itself was not paved; there were pools of stagnant water, and there was a bed on the ground floor of the back portion of this house and therefore close to all this filth. The houses on either side were in a similar condition. In another very miserable street, where the house yards are back to back, so that the privies and ashpits have to be emptied by carrying their contents through the dwelling-rooms, I noticed a number of barefooted children playing over an open sewer grid. The sewage could be seen flowing underneath and a very strong odour arose. Many complaints were made by the neighbours as to the nuisance caused by this sewer ventilator, and in the nearest house there was a woman suffering from typhoid fever at the time of my visit. Close at hand there is a court consisting of six houses. These dwellings have but one water-tap between them. The water comes from a cistern which forms the roof of a dirty water-closet standing in the yard. The cistern is only partially covered over and dead birds have been found in the water. Yet it would not cost much to have a tap direct from the main and let the water in the cistern serve only for flushing the closet.

That there is some hope of progress in Belfast may be gathered from the fact that one of the first acts of the newly elected town council has been to order the closure of Henrietta-court. This slum has been a standing grievance for many years. It consists of a short passage with two-roomed cottages on each side. The cottages are so small that the ladder-like stairs to reach the upper room are placed in the middle of the lower room. The back yards (if so diminutive a space can be called a yard) measure on one side of the court 6 ft. 7 in. by 5 ft. 10 in., and on the other side only 3 ft. by 11 ft. The privy and ashpit extend from the house wall to the back wall of the court and consist of an open trench with a seat over half of it. By way of improvement these seats were removed some time ago from the house wall to the yard wall, which of course made no sort of difference as the contents of the privy came against the house wall just as before. During a whole year these houses remained without any water-supply whatsoever. There is no room to effect any improvement and the only thing that can be done is to pull these cottages down and widen the court into a street, and I presume that this is what will now be done. Not far from this spot I went to a house in a row where there was a case of typhoid fever. There was an open space in front of this row, where a number of costermongers' carts were placed side by side. A pool of stagnant putrid water had accumulated in front of the patient's door. The yard behind this house was not paved and the drain was not trapped. This yard measured 10 ft. by 4 ft. 6 in., so that the untrapped drain let the sewer-air up close under the patient's bedroom window. In another court close by there are two houses, each having a back yard which measures 12 ft. by 10 ft. In the centre of these little yards there is a large untrapped brick drain. In front of the houses, in a sort of entry space that can scarcely be called a street, a defective bell-trap has been placed over the drain. This space is unpaved and covered with filth, though the scavengers are said to sweep it out twice a week; finally, within twelve feet of the windows there is a heap of rubbish and nightsoil.

Perhaps I have now said enough to show how widespread are the insanitary conditions that prevail in Belfast. How they can have arisen in so modern and prosperous a town must be a matter of surprise. The high death-rate could in many instances be traced to unhealthy dwellings, and such deaths might be utilised as a means of bringing the grievance home to the persons concerned. Within a week the superintendent medical officer of Belfast is told the district in which a death has occurred, but as these districts have some 30,000 inhabitants, rich and poor, and as even the name of the street is not mentioned, such scant information is of little or no use. To obtain at least some sort of information Dr. Whitaker, the superintendent medical officer, explained to me that he had to resort to a stratagem. The majority of the persons who die in Belfast are buried in the borough cemetery. To obtain authorisation for the burial their friends have to call at the town hall and here they often and voluntarily give information as to the cause of death. Dr. Whitaker sends one of his clerks to collect this information and thus finds a clue to places where deaths occur and to their cause. Can anything more unsatisfactory than this be conceived?

Of course, especially in the poorer districts, the inhabitants are themselves in a measure to blame for the insanitary state of their homes. For instance, nearly all the houses have drains in their back yards. These drains fortunately do not pass under the houses, but travel from yard to yard till they reach a transversal street and then they join the public sewer. Why, it will be asked, should not water-closets be placed in connexion with these drains instead of the abominable system of privies and ashpits? The answer is that many of the inhabitants are not fit to use water-closets. The landlords have strong objections to water-closets. They maintain that these would be maliciously smashed whenever they had any difficulty with their tenants. Cases were cited where tenants have pushed old shirts down the closets so as to spite the landlords by blocking the drains. It is not so much the expense of putting in water-closets that the landlords fear as the difficulty of keeping them in order. Then there are also legal difficulties in defining what is a private drain and what is a public sewer which complicate matters. The habits of the people and the vagueness of the law are obstacles to the enforcement of the water-closet system. Again, if a drain in a back yard has a suitable syphon-trap people have been known to empty a whole tubful of water over the gully. Instead of emptying the water out gradually they will pour it all out at once and then, seeing that it cannot immediately pass away through the syphon, they will smash the trap to pieces so as to make the hole larger. Undoubtedly ignorance, carelessness, dirty habits and mischievous propensities render it very difficult to provide the poor with healthy homes. As a means of promoting cleanliness the town authorities are to be commended for having built several public baths, which, however, do not pay their working expenses because the people attribute so little importance to personal cleanliness. As an instance in point, a hospital house surgeon related to me that on one occasion the police having arrested a woman who was wounded brought her to the hospital. According to the rule she was ordered to take a bath before being admitted to the surgical ward. But the woman obstinately refused. She looked with horror on a bath as a form of modern torture. She preferred to be removed to the police cells than to enjoy the comparative freedom and comfort of the hospital if for this advantage it was necessary to take a bath. Therefore she submitted to incarceration in the common lock-up. But while thus fully recognising the difficulties which the people themselves create I fail to see in this a sufficient reason for refraining from pressing forward the much-needed sanitary improvements. The same difficulties existed elsewhere but were in due course overcome. At first there are resistance and trouble, but in time the advantages of good sanitation are better appreciated. Even to-day in London the same obstacles have to be overcome when dealing more especially with foreign populations, poor Italians and refugee Jews, who come from countries where sanitary conveniences are unknown.

Though there are all sorts of side issues and contributory causes, the high death-rate and the exceptionally insanitary condition of Belfast are in the main due to the condition of the house property, and thus it is that typhoid fever is endemic at Belfast and that the town suffers from so high a death-rate.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

THE LIFE OF THE POOR IN BOMBAY.

THE sanitary condition in which vast numbers of the people live is terrible in the extreme. The present epidemic has given opportunities for inspection of premises and of learning something of the inner life of the native poor such as has been given to only a few to know before. The fearfully crowded houses, the dark, unventilated rooms, the fumes of cooking and burning wood and drains which pervade every building, the hard work, and the miserable diet epitomise some of the chief causes of the imperfect physique and feebleness of constitution which characterise the great mass of the people. When one sees them in apparent health one ceases to wonder how quickly they succumb to disease. Large numbers of houses are strong, stone-built dwellings of many storeys high; comparatively few are of wood. But how small the rooms and in what narrow spaces every convenience for a family has to be provided for. It is almost heresy in India to complain of the use of cow dung because it is applied to such a variety of purposes. The smearing of floors and passages with it is adopted to provide a smooth surface, but when dry it gives off a highly objectionable dust and when wet becomes converted into an offensive putrescible mass. The way the women collect this dirt in the street, the manner in which it is messed about in the houses, the utter indifference about the chances of its polluting their food and drink, make the application of this material one of the first reforms which might well be initiated. The little cooking stoves are made of cow dung mixed with clay, some of the fuel used is cow dung dried into cakes, the bed is often the dried cow dung on the floor, and the brass and tin and copper utensils used in cooking are cleansed with the cow dung and earth which makes the ground on which the people tread.

There being no chimneys all the effluvia of cooking, of persons crowded together, of foul emanations from soiled clothes and dirty habits become mixed and remain almost undiluted in the rooms in which they continually live. The habitations, especially on the ground- and first-floors, are often pitch dark, windows of any kind are frequently absent, and the sole entrance comes from a dark and stinking passage. Vast numbers are of this description. The ground-floor passages have very often an imperfectly covered drain running through them and the privies are often placed in dark and totally unventilated corners.

As there is no water carriage for the excreta—the night-soil being collected in baskets placed beneath the native forms of closets—and as the habits of the natives are so filthy the condition of these places is almost beyond description. Some of them are flushed down with water occasionally, but all of them possess the smell of decomposing ordure. What the condition must have been before the city was provided with a regular water-supply can hardly be imagined, because the wells which remain, although now mostly disused, are in the centres of dwellings and filled with hardly anything better than diluted sewage. If one could judge from the frequent personal ablutions to be seen practised one might imagine that personal cleanliness compensated for all the other forms of filth, but the heads of grown-up people as well as those of the children are frequently seen crowded with vermin, itch is common on all parts of the body, an unpleasant unwashed sort of odour characterises most of the people and dirty secretion-soaked rags form the partial coverings which most of the poor wear. A very objectionable institution is the "nahani," a sort of sink on the floor in the corner of the room. Its use is ostensibly for washing purposes, but all sorts of filth get into it and it drains into an unventilated and often choked-up soil pipe which opens into the gully below. The gullies between the houses are open drains, sometimes to be found nearly dry with deposits of all sorts of filth and at others running with foul and stinking water to the surface drains on each side of the street.

As for the overcrowding, it would be considered excessive even in decent well-ventilated dwellings, but with houses constructed after the above fashion with 200, 300, 400, and even 500 and 600 persons under one roof, the conditions of life are terrible in the extreme. For from four, five, or six people to live in one small room is very common. Some of the larger

rooms have several families. In one large room were counted thirteen different families with their separate cooking stoves and domestic conveniences. The large collection of dirty old clothes, unused pots and pans, boxes and other articles which form the furniture and effects of some of the people, materially reduces the cubic space for each individual, but the absence of any provision for ventilation in such a large proportion of the tenements is one of the most urgent needs for amelioration. Many of the people work very hard, the women perhaps harder than the men. Long hours of simple mechanical and monotonous work for 2, 3, or 4 annas a day result in a condition of almost constant exhaustion. The meagre diet of rice and flour, with butter of some sort, vegetables and fruit, perhaps explains the small muscular development and feeble physical powers of the majority of the people. Such is the condition under which hundreds of thousands pass their existence. With but little domestic affection apparently beyond that for their children, with a hard struggle for the bare necessaries of life, with the fatalistic spirit of their religion, it seems almost hopeless to improve their lot. Much, however, could be done to make them live under healthy conditions and then perhaps the mental and moral improvements would follow.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

District Nursing Society.

THE twenty-sixth annual meeting of this society was held on Feb. 17th, when it was stated that the work of the society had greatly increased during the past year. The committee contemplated the provision of nurses throughout the whole of the city. The grant of £2500 from the Jubilee Fund furnishes an instance of the interest felt in the work of the society. It is proposed to establish four districts, each containing from eight to ten nurses, approximately one to every 10,000 of the population. The report stated that during the year 1968 patients had been attended and 47,367 visits had been paid. The financial report showed a balance in hand of £94 18*s.* 10*d.* The Lord Mayor spoke of the useful work done by the society and warmly commended it to the public, pointing out the fact that less than 350 people had contributed to the expenses. The work done is sound and of great service. There is every reason for looking upon its extension as desirable and worthy of substantial support.

Special Hospitals.

Some criticism has been engendered by a proposal made at one of the special hospitals for widening the area of the work done. It has been suggested that a better social class of patients should be admitted to the out-patient department on the payment of 5*s*, half of which it is proposed should go to the medical man and half to the hospital funds. Already the registration fee paid at this hospital is 2*s.* 6*d.* and patients coming again are expected to pay 1*s*. Of course this cannot be applicable to a number of the poorer patients, but as it is it brings in a considerable revenue to the institution. The new proposals are viewed with much disfavour by the medical staff, and the outside opinion among the profession is strongly opposed to what is regarded as an undue interference with the practitioners of the town and an unwarrantable extension of the functions of what is, or ought to be, looked upon as a charitable institution. The tendency to convert hospitals into provident dispensaries is subversive of charity in its proper sense and contrary both to the principles of administration and to the benevolent purposes for which they are founded. It is hoped that the scheme will not be pushed in view of the strong adverse feeling which it has evoked.

Mason University College.

The report for the year 1897 has just been issued. It states the important fact that the annual grant to the college has been increased from £1400 to £2700 per annum, subject to the condition that at least three-fourths of this increase of the Parliamentary grant shall be allocated solely for staff purposes. Accordingly an increase has been made in the stipends of those demonstrators and assistant lecturers at the present time in receipt of less than £125 per annum to the sum of £125. A professorship of mental and moral philosophy and political economy has been established at a sum of £325 per annum, plus a sum of one-fourth of the students' fees. Various increases have been made in the stipends of professors. £463 4*s.* has been received towards the fund for equipping the department of electrical engineering, and sums amounting to £1968 10*s.* have been given towards the department of civil and mechanical engineering. The bacteriological laboratory has been enlarged and refitted. The statement of accounts for the year shows that the total expenditure on general account was £17,066 and the income £14,647 7*s* 8*d*. The deficiency includes the sum of £502 13*s.* 4*d.*, a year's interest on the loan of £13 000, and other expenses, including alterations and additions to building, the bill of costs for the incorporation of the college, &c. Against these items there are two sources of special income, the increase in the Treasury grant and the donation of £900 from the executors of the late Mr. H. C. Fulford. The committee earnestly appeal for additional donations and subscriptions.

Excess of Salt in Ale.

An important prosecution under Section 6 of the Food and Drugs Act, 1875, was lately heard at a Birmingham police-court. On Dec. 26th an inspector of the Health Department went to a public-house and purchased a pint of ale and a pint of beer. The samples were submitted to the public analyst, who certified that the sample of ale contained at least eighty-five grains of salt per gallon. The average quantity, it was stated, should not exceed fifty grains per gallon. Out of 736 samples examined between 1873 and 1896 86 per cent. contained under fifty grains per gallon. The analyst, Dr. Hill, said that it excited thirst artificially and was thus injurious to health. There was no legal standard, but the Board of Inland Revenue did not consider it necessary for further inquiry if the salt did not exceed fifty grains per gallon. A fine of 40*s.* and costs was imposed. The ordinary custom of putting salt into ale indiscriminately without reference to quantity must therefore be abandoned and more strict regard be paid to the quantity used so as to keep within this reading of the law.

Feb. 22nd.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Royal Southern Hospital.

THE annual report of the Royal Southern Hospital showed that the funds are in a fairly satisfactory condition inasmuch as the small debit balance of £232 7*s.* 9*d.* at the end of 1896 had been further reduced to £106 10*s.* 11*d.* at the end of 1897. The managers of the hospital are to be congratulated on their fortunate position as compared with the experiences of neighbouring charities in the matter of income. The number of cases treated in the hospital during the year amounted to 1951 in-patients and 10,094 out-patients. The daily average of beds occupied was 175. There were 188 deaths, of which 25 occurred within twenty-four hours after admission. Sixteen bodies were brought in dead which were not included in the above figures. During the year the horse ambulance was summoned to 407 cases, the total number of calls since the commencement of the service having been 4289. Mention was also made of the large number of cases of spinal curvature which had been treated at the hospital, upwards of seventy operations having been performed, the results so far being most encouraging. Mr. Henry G. Rawdon, the senior surgeon, has retired owing to lapse of time and has been appointed consulting surgeon. The candidates for the post vacant by Mr. Rawdon's retirement, so far as are at present known, are Mr. George P. Newsolt, surgeon to the Stanley Hospital, and Mr. Carthew Davey, the surgical tutor at the Royal Southern Hospital. The election has been fixed to take place on March 9th and will be conducted on the unwieldy system which until recent years also existed at the Royal Infirmary and Northern Hospital, the electors consisting of life trustees, annual subscribers of two guineas, the honorary medical officers, and the churchwardens of the parish, making a total of about 900 electors.

Memorial to the late Mr. John Laird, of Birkenhead.

At a public meeting held in Birkenhead it was resolved to raise a sum of between £2000 and £3000 to establish a

fund to be called the "John Laird Memorial Fund"; that a bust of the late Mr. John Laird be obtained and placed in the Town Hall, Birkenhead; and that the surplus of the fund be divided in such proportions as the Executive Committee may hereafter determine between the Birkenhead Borough Hospital and the Birkenhead and Wirral Children's Hospital, the money to be invested by those institutions respectively, the income thereof to be devoted to the sending to convalescent homes or other similar institutions of such patients as the respective committees on the advice of their medical officers may deem desirable.

The Southport Infirmary.

The annual meeting of the subscribers to this charity was held in the Mayor's Parlour, Southport, on the 12th inst. The mayor, in moving the adoption of the report and balance-sheet, said he was glad to see a considerable increase in the number of patients treated at their own homes. The committee have added special departments for the eye, ear, nose and throat, and they still require £500 to clear off the debt on the new infirmary. It was resolved to sell the old infirmary building for £2600.

Gift to the Liverpool Dental School.

An important meeting of the midland and northern districts of the British Dental Association was held at Warrington on the 19th inst. In the evening the large company, including students from the Liverpool Dental Hospital, were entertained by Mr. T. Fletcher, F.C.S., and Mr. J. Taylor, of Warrington. Mr. Fletcher in an address on "How to Succeed" said that for several years a series of prizes had stood in his name at the Manchester Dental School and that he was arranging for a similar series at the Liverpool school. No conditions would be attached to the prizes (which amounted to over £50 per annum) except that they should be applied to those branches where they would be considered by the dean and councils of the schools to be of especial encouragement.

Feb. 22nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Grant to Mercer's Hospital, Dublin.

THE annual meeting of the supporters of the Dublin Hospital Sunday Fund was held at the Molesworth Hall on Feb. 16th, the Bishop of Ossory filling the chair. The report of the Council contained with other matters a statement that at the meeting in February last an amendment, moved by Dr. Grimshaw, the Registrar-General, and seconded by Dr. Jacob, "that the sum allotted to Mercer's Hospital for the year 1897 be held by the committee of distribution of 1898 until they are satisfied as to the prospects of the future management of the hospital and, if not satisfied, to report to the Council," had been put from the chair and carried. Lord Justice Fitzgibbon moved an amendment to the report, which after some discussion was carried, and was to the effect that the report of the Council be adopted, with the exception of the portion relating to Mercer's Hospital, and that the subject of the grant to Mercer's Hospital be referred back to the Council for consideration.

The Hospital for Incurables, Donnybrook.

The Corporation of Dublin have recently threatened to withdraw their draft of £300 a year to this hospital on account of recent changes in its list of governors. At a meeting which was held in the hospital on Feb. 14th a resolution was proposed by Judge Kane that a committee chosen from the governors, of whom there were nearly a hundred present, be appointed to inquire into the mode of election of the acting committee of the institution. The resolution after some discussion was passed in a modified form by a large majority.

Royal College of Science, Dublin.

Mr. Henry Hanna, M.A., B.Sc. R.U.I., a distinguished student and scholar of Queen's College, Belfast, has been appointed Demonstrator of Biology, Geology, and Palæontology in the Royal College of Science, Dublin.

The Royal University of Ireland

At a meeting of the Senate of the Royal University of Ireland held on Feb. 17th the following teachers in the Belfast Medical School were re-appointed examiners for the year 1898; Professor Byers, M.D. R.U.I., in Midwifery; Professor Whitla, M.D. R.U.I., in Materia Medica; and Dr. J. Lorrain Smith, M.D. Edin., in Pathology.

The Epidemic of Influenza in Ulster.

The epidemic of influenza is still very prevalent in different parts of Ulster, the pulmonary and gastro-intestinal types being more commonly met with, the change in the weather from mild and warm to cold and frosty with snow not having made any difference in the wide-spread nature of this very strange and protean disease.

Feb. 22nd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Adjourned Discussion on Blistering

THE discussion on this subject was resumed at the Academy of Medicine on Feb. 19th. M. Huchard said that his principal reason for being very chary of using blisters was the way in which they were apt to cause cystitis or nephritis in individuals predisposed to these affections. Therefore he never used blisters in the aged, the gouty, patients with arterio-sclerosis, or who suffered in any way with renal affections. Blisters are not only dangerous on account of the cantharides they contain, but also on account of the wounds they produce. In all infectious maladies, or those which bring about a great lowering of nutrition, pyrexias, tuberculosis, and the like, it is useless to bring about a new focus of microbial infection at the surface of the skin and so throw upon the kidneys the extra work of eliminating toxin produced by a secondary infection. M. Huchard objected to the use of blisters both in pneumonia and pleurisy, for even if they do no harm in such cases they are mere delusions. As for the revulsive and analgesic action of blisters these are facts, but there are other means and methods of obtaining these effects without danger to the patient. Such, for instance, are the common mustard-plaster, the application of hot water, the cautery, &c. There remains the very interesting question raised by M. Robin—namely, that of the increase in gaseous exchange under the influence of blisters. This increase is a fact, but it must always be remembered that the same effect is produced by any cutaneous excitation. The cold bath, for instance, brings about all the benefits which have been claimed for blisters in cases of pyrexia. It brings about an increase in the gaseous exchanges, facilitates the elimination of toxins, augments phagocytosis, and braces up the nervous system. If these ideas appear to be somewhat primitive M. Huchard reminded his audience that the moxa, the cautery, and the seton have been known for a long time and disappeared after a like discussion and owing to the advance in modern therapeutics which was based upon a doctrine really conformable to facts. Vesication, according to M. Huchard, must disappear in this era of Pasteur. M. Panas showed that blistering was far from being abandoned in ophthalmology. By creating an artificial pathological focus it brings about a violent revulsive action which is eminently useful in that it calls up leucocytes to the very place where they are needed. M. Cornil referred to the physiological action of cantharidin upon the tissues. Researches which he has made at various times upon the microscopical alterations brought about by experimental cantharidin poisoning enable him to say that considerable dangers exist in the employment of blisters, especially when the kidney is hardly up to its ordinary work, and this is a condition which one cannot diagnose beforehand. M. Robin considered that M. Huchard had wandered away from the original point of the discussion. He forgot to distinguish between general exchange and respiratory exchange and it is the latter which blisters increase so largely. If it is right to help the elimination of toxins in every possible way it must not be forgotten that blisters by their oxidising action on the tissues burn up these very toxins in the wounds and transform them into soluble products which are far less dangerous.

The Treatment of Hæmorrhage by Local Applications of Gelatinised Serum.

At the meeting of the Hospitals Medical Society, held on Feb. 11th, M. Siredey begged to be allowed to draw the attention of his colleagues to the excellent results

obtained in the treatment of hæmorrhage by the use of local applications of gelatinised serum after the method of M. Paul Carnot. During the last four months M. Siredey has had occasion to treat nine severe cases of metrorrhagia, some in private and others at the hospital, and in every one a successful result was obtained. The hæmorrhage arose from fibroids, abortion, and retention of placental tissues or pieces of decidua, and most of the cases had not been relieved by the ordinary methods of treatment, such as hot douches, plugging, and the like. M. Siredey employed one of the two following methods. After washing out the vagina with hot water, previously boiled so as to remove any clots, he swabbed out the uterus with a pad soaked in the serum and gelatin and afterwards introduced into the uterus a narrow piece of sterilised gauze soaked in the serum. Without having to employ any tight plugging he was almost invariably able to arrest the hæmorrhage in this way. In one case which occurred in his private practice he happened to have no gauze at hand; he therefore prescribed an injection of two pints of the gelatinised serum, taking care to place the patient on her back with the buttocks raised by a pillow so that clotting should take place in the vaginal fornices in contact with the neck of the uterus. The same treatment, either injection of the serum or light plugging with gauze steeped in the same, gives excellent results in epistaxis. The preparation of the serum is very simple, the formula being: sodium chloride 7 grammes, water 1 litre, and gelatin 50 grammes. The whole is sterilised in an autoclave, taking care that the temperature does not go above 105° C., for in that case the gelatin will become modified as to its power of coagulation. If it is thought well there is no harm in adding perchloride of mercury in the proportion of 1 in 1000 or carbolic acid in the proportion of 1 in 100, but this is not necessary. The serum can be put up in flasks of various sizes and will keep good for a long time. M. Siredey has been successful in every case where he has employed this method and it has one great advantage over other methods in that it is quite harmless.

The Right of Midwives to use Forceps.

The Special Committee of the Chamber of Deputies has just been startled by a new petition from Madame Anna Bedrines, a midwife at Egreville, Seine-et-Loire, asking it to legalise the use of forceps by midwives. The committee, through its chairman, M. Isaac, has refused the prayer of the petition and for the following reasons. By Article 4 of the Act of Nov. 30th, 1892, midwives were formally forbidden to use instruments. The decree of July, 1893, recognised two classes of midwives and simply declared that they should undergo two years of study. These conditions are sufficiently stringent for the *rôle* midwives have to play and for the amount of aid to parturient women which is expected from them. But if they are allowed the use of instruments their status is altogether altered and if this experiment is to be tried they must increase both the length of time for which they study and make these same studies more profound. If these more stringent conditions came into force they would have an injurious effect upon the recruiting of the ranks of a class which is at present of great use as auxiliaries to medical men. Therefore such action would not be advantageous.

Feb. 22nd.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Influence of X Rays on Bacteria.

SOME interesting experiments on the influence of x rays on bacteria have been made by Dr. Rieder, *privat docent* at Munich University, and have been published by him in the *Münchener Medicinische Wochenschrift*. He used for this purpose different media such as agar, serum, and gelatin spread on glass plates placed under a piece of lead with a circular aperture in it, the whole being so arranged that a portion of the culture plates was freely exposed to the x rays which passed through the aperture, while the remaining part of the plates was protected by the lead, which is quite impervious to the rays. Ordinary light was excluded by covering the aperture in the lead with black paper. The culture media on the glass plates were inoculated with cholera bacilli, anthrax bacilli, diphtheria bacilli, bacterium coli, staphylococci, streptococci, and tubercle bacilli, and the whole was exposed for a period of from one to three hours to a very powerful Roentgen apparatus furnished by the Voltohm Company, of Munich, the vacuum tube being placed at a distance of 30 cm. (12 in.) from the glass plate. In this way Dr. Rieder succeeded in ascertaining that the bacteria under the opaque leaden screen developed freely, whilst under the circular hole where the x rays had free passage no colonies or only a few small ones appeared. The x rays also had the effect of stopping the development of cultures in process of growth. Unfortunately the experiments made with tubercle bacilli were inconclusive as Dr. Rieder had accidentally omitted to fix the black paper over the hole in the lead so that the influence of ordinary light was not totally excluded. The x rays proved to be much more powerful than sunbeams in stopping the development of bacteria cultures. Dr. Rieder is opposed to the opinion that the influence exerted by the x rays may be in reality an effect of heat, for the gelatin was not liquefied by the rays, and the fact that germs derived from the air subsequently developed on the gelatin plates in the ordinary way seemed to show that there was no chemical alteration of the media. He concludes from these preliminary experiments that the results obtained by him must be completed by observations on animals and eventually on the human subject. He says that it would not be necessary to destroy all the bacteria which occur in the body, but that it would be a great advance if we could stop the further development of pathogenic germs. The powerful bactericide action of the blood would then easily succeed in destroying the rest. The x rays must only aid the organism in its struggle against its enemies. The facts now published are obviously of great theoretical interest, but further observations are necessary to ascertain whether they are capable of practical application.

Methylene-blue in Malarial Fever.

Dr. Cardamatis, of Athens, inspired by the researches of Professor Ehrlich, of Berlin, and Professor Boinot, of Paris, has successfully used methylene-blue in the treatment of malarial fever. In his report communicated to the *Deutsche Medicinische Wochenschrift* he publishes 275 cases where the drug was administered. The daily dose was from ten to twelve grains ("Gran") for adults, eight grains for younger patients, six grains for children, and one or two grains for infants at the breast. In typical intermittent fever the drug is given ten hours before the beginning of the paroxysm; in remittent or continuous fever eight hours before the remission. When both methylene-blue and quinine failed a combination of the two drugs proved useful, but the effect was less marked when the methylene-blue was associated with arsenic. The combined treatment was necessary in only 30 of the 275 cases. In quotidian ague, when the patients had become free from fever, after five days' administration, the drug was given for six days. A pause of two days followed, after which it was again given for four days; after a second pause of eight days there was a final administration spread over two days. After twenty-two days a radical cure was obtained in this way. When the attacks appeared again after the fifth day treatment was continued for forty-eight days with several interruptions. In tertian and quartan ague the first stage of the treatment lasted twelve days and the remedy was given for sixty days with several carefully arranged intervals. The advantages of methylene-blue were especially obvious in those cases where quinine had proved useless or where there was intolerance of it. The drawbacks associated with methylene-blue are the staining of the tongue and the lips; a slight amount of cystitis was also sometimes observed, but these inconveniences are very slight in comparison with the radical cure obtained in nearly every case. Immunisation seemed to be produced by the treatment, for although the convalescents continued to reside in the malarial district very few of them indeed were subsequently attacked. With the exception of the cystitis already mentioned no toxic symptoms were ever observed. In 18 instances the fever disappeared after the first day, in 36 after the third, in 84 after the sixth, in 88 after the tenth, in 18 after the eleventh, and in 13 after the twelfth day. In 18 cases no cure was obtained. In 38 out of the 275 cases a relapse occurred after two months.

Remarkable Misadventure with Chloroform.

A sad event happened recently in the Catholic Hospital at Herne, in Westphalia. A man who had received a gunshot

wound of the abdomen was brought to the hospital and was, of course, at once operated on. The operation was very difficult and chloroform administration had to be kept up for about four hours. Gas was the illuminant used in the operating room and it appeared that the gaslight decomposed the chloroform with evolution of powerful chlorinated vapours which overcame the two surgeons and the Sisters of Mercy. One of the sisters died on the second day and the lives of the others were in great danger.

Feb. 21st.

ROME.

(FROM OUR OWN CORRESPONDENT.)

"*Pneumonia Perniciosa.*"

HIGH initial fever, mostly with strong rigors subsiding after a few hours in well-pronounced diaphoresis only to reappear with new though less strong rigors, the temperature still remaining high; lateral pain referred to a point; expectoration of glutinous adhesive matter mingled with blood (*sangue vivo*), not rusty; extension, various and more or less abrupt, of the physical signs, tubular breathing, resonance slightly tympanitic, becoming all at once dull and bronchial; marked nervous depression and rapid enfeeblement of pulse; urine scanty, loaded with urates, strongly tinged with "uro-erythrina"; spleen sensibly enlarged and very frequent diarrhœa—such is the clinical account given by Dr. Gaetano Amoroso (*privat-docent* in medical pathology at Naples University) of what he provisionally calls "pneumonia perniciosa"—a disease which he saw for the first time a few months ago in company with Dr. Cardarelli, professor of clinical medicine in the same school, and of which he has quite recently seen four distinct cases, all of them in the Neapolitan circuit. In an open letter to Professor Cardarelli he follows up the above description with notes of treatment. Proceeding on the surmise that the "pneumonia" was indeed "pernicious," he began the treatment with very strong doses of quinine, notably with subcutaneous injections of the bichloride (half a gramme in each injection). The response appeared to warrant the surmise, the patients soon recovering first from the external signs of distress, then from the fever, and finally entering on speedy and steady convalescence. Dr. Amoroso has yet to confirm his surmise of the "pernicious" character of the pneumonia by bacteriological examination, and this he promises as soon as practicable. Meanwhile an able colleague (Dr. Michele de Capoa) joins issue with Dr. Amoroso, first, as to the "rarity" of the above cases, of which he (Dr. de Capoa) and other practitioners have seen several in their private *clientèle*. The prevailing influenza, he says, is so modifying the typical "pneumonia fibrinosa" that such hybrid or capricious forms as those described by Dr. Amoroso tend to become ever more common. Next, he objects to the creation of a new "clinical entity" under the name of "pneumonia perniciosa," for, he contends, the "localisation" in the lungs of the pneumonic infection, whether it comes from the bacillus of Pfeiffer or from the pneumococcus of Weichselbaum, may be more or less extended, more or less grave, according to the intensity of the infection contracted and according to the greater or less predisposition of the patient to such "localisations." In the third place, Dr. de Capoa maintains that Dr. Amoroso's cases have been observed before, the late lamented Professor Cantani, of Naples, having described a form of "abortive pneumonitis" which, commencing "tumultuariamente" (in a confused manner), with strong rigors, pain referred to a thoracic point, high fever, sanguineous (not rusty) expectoration, tubular breathing, &c., ran its course and terminated in cure within four days. Finally, he argues that the efficacy of the quinine salts in these cases is no positive argument for the rounding off or "individualising" of this variety of the pneumonic infection, the efficiency of these salts in infective maladies—and especially in influenza—being notorious, especially in those forms which, running a certain course, tend naturally towards cure. As the controversy stands the profession awaits Dr. Amoroso's bacteriological examination, noting at the same time the reasonableness of Dr. de Capoa's protest against multiplying "clinical entities," particularly in presence of a malady so protean as the prevailing influenza.

Feb. 15th.

Obituary.

THOMAS WILLIAM MUIR LONGMORE, M.R.C.S. ENG., L.R.C.P. LOND.

WE have to record the death of Mr. T. W. M. Longmore, the eldest son of the late Sir Thomas Longmore and Lady Longmore, of Woolston, Hants. After completing his general education at Westward Ho he entered the medical department of King's College at the commencement of the summer session of 1882 and in 1884-85 he obtained the Resident Warneford Scholarship. He also gained the Leathes Prize and the prize in Clinical Medicine. After finishing his curriculum at King's College he qualified in 1889 and was elected an Associate of the College. He then filled the offices of assistant house surgeon at the Shropshire County Hospital and at the Royal South Hants Infirmary. Mr. Longmore's medical career was greatly interfered with by a breakdown in his health and he never thoroughly recovered from a severe pneumonia and some pleuritic attacks from which he suffered whilst a student and which were followed by a chronic phthisis. This prevented him joining the army medical service as he had intended and compelled him to regularly spend his winters abroad. For many years he was in charge of one of Messrs. Cook's Nile steamers and lately was medical officer to the Luxor Hospital and resident physician at the Luxor Hotel. He was also for some months at Jerusalem in charge of the ophthalmic cases at the dispensary and this proved a most severe strain on his health and considerably affected him when apparently slowly recovering from his pulmonary trouble. He died at Luxor on Feb. 7th in his thirty-fourth year. Everyone who met "Tommy Longmore" was charmed with his courteous manner, his genial and gentle disposition, and will feel his death as a personal loss.

UNIVERSITY OF CAMBRIDGE.—Mr. J. G. KERR, First-class Natural Sciences Tripos, 1894-6, who has already distinguished himself as an explorer and a naturalist in South America, has been elected a Junior Fellow of Christ's College.—Sir William Broadbent has been appointed by the Senate as an Elector to the Downing Professorship of Medicine.

MIDLAND MEDICAL SOCIETY.—A meeting of this society was held on Feb. 2nd at the Medical Institute, Birmingham, the President, Mr. J. W. Taylor, being in the chair.—Dr. Short showed a case of Transposition of the Heart, Liver, Spleen, and Stomach. The patient, a young man, aged twenty years, came under treatment in October, 1897, for subacute rheumatism when the abnormal position of the organs was discovered. The x rays were passed through the body and the position of the heart (on the right side) and the liver (on the left side) were plainly seen on the screen. A skiagraph was taken and will be shown at a future meeting. The position of the stomach on the right side was demonstrated by inflating it. The patient was not left-handed and had had no previous illness.—Mr. G. Heaton showed a patient in whom after a short illness a large Fæcal Concretion had been discharged from the Umbilicus. The patient before his illness and since his discharge has been in perfect health. There was no evidence or history of any tuberculous mischief. Mr. Heaton suggested that perhaps the concretion had become impacted in a Meckel's diverticulum, had set up ulceration, and then fortunately for the patient had been discharged through the umbilicus.—Mr. Christopher Martin showed a specimen of Cancer of the Body of the Uterus removed nine months ago by him by the operation of hysterectomy from a patient aged fifty-two years. There was a history of severe and continued hæmorrhage for nearly twelve months. On examination a large, hard, mobile fundus was felt and a diagnosis of myoma was made. It was then a question as to whether the appendages should be removed or vaginal hysterectomy performed. Fortunately for the patient Mr. Martin decided to perform hysterectomy. It was only after the removal of the organ that the malignant nature of the disease was evident. The patient made an excellent recovery and so far had no signs of recurrence.—Dr. J. W. Russell read a paper on Iodoform in the Treatment of Phthisis.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the necessary examinations and conformed to the by-laws and regulations, have been admitted Members of the College and have received their diplomas:—

Addison, Joseph Bartlett.
Akers, William Dutton.
Allfrey, Frederic Henry.
Ashe, Frank.
Austin, Neville Henry.
Barlow, Herbert Cecil.
Bendle, James Huxtable.
Beringer, Fitzjohn Alfred.
Blakiston, Frederick Cairns.
Bramsden, William Arthur.
Chater, Harold John.
Chennell, Ernest Philip.
Collens, Edward Howard.
Collum, Rowland William.
Collyer, Bertram Joseph.
Curme, Duncan Edward.
Darbyshire, Douglas Edward.
Davies, Thomas John.
Davies, William John Edwin.
Dee, Maurice Vincent.
De Gannes, Joseph Louis Fernand.
Denyer, Stanley Edward.
Dowding, Ernest Frederick Charles.
Dupigny, Joseph Elford.
Eastment, Alan Grant.
Ellery, Ernest Edward.
Elliott, Albert Ernest.
Fairbank, Christian Beverley.
Fairweather, William Ernest.
Flood, Frederick Gray.
Fuller, William Anderson.
Geach, Robert Neville.
Ghany, Mahomed Abdul.
Glover, John Abel.
Greg, Arthur Hyde.
Halliday, Stratford Dobree Tollemache.
Hamilton, John James Cecil.
Harness, Henri Nelson.
Harston, George Montagu.
Hatfield, Ronald.
Hayford, Ernest James.
Haylock, Sydney John.
Hewer, Edward Septimus Earnshaw.
Hollings, Guy Bertram.
Horton, William Alexander.
Humbly, William John.
Johnson, Rance Dreweatt.
Jones, George William Grey.
Joy, Norman Hubert.
Kendal, Nicholas Joseph.
Klivert, John Ellis.
King, John William.
Knight, Charles Voughton.
Langley, John Inman.
Lee, Frederick William.
Lloyd, Edmund Eyre.
Lloyd, Langford Newman.
Lloyd, Richard Harte.
Lobb, Francis Frederick.
Lovegrove, Frederick Thomas Alexander.
McKinlay, John Robert.
MacLellan, William.
Millar, Alexander Fleming.
Milne, John Wallace.
Moore, Percy William.
Morgan, William Ellis.
Morris, Isaac Lleywelyn.
Mort, James Henry.
Mottram, Guy Nasmith.
Naesmyth, Donald Lutterell Kilve.
Nanjapa, Codanda Apacha.
Nicholson, Charles Rowley.
Nolan, Maurice Joseph.
Osborne, Albert.
Owen, Lanyon Edward.
Parsons, Allan Chilcott.
Parsons, Walter Brock.
Pelle, Harry Diamond.
Phillips, Herbert James.
Phipps, George Constantine.
Pierce, Robert Wynne Charles.
Powers, Richard Henry.
Prichard, Arthur Heaward.
Prior, Guy Percival Underdown.
Ransford, Sydenham Yeast Gifford.
Rivers, Walter Courtenay.
Robinson, Arthur Cecil.
Rose, Frank Herbert.
Rose, Samuel Frank.
Ross, Alexander Michael.
Ross, Edward Halford.
Shedden, Arnold Ward.
Skevington, Joseph Oliver.
Steele, George Herbert.
Stock, William Stuart Vernon.
Sweetlove, John Wallace.
Thwaites, Gilbert Bahn.
Tollputt, Arnold George.
Trevor, Arthur Herbert.
Way, Arthur Orsborn.
Weber, Edward Albert.
Wellby, Stanley.
Wernet, August Joseph.
Whitehead, Clarence Barns.
Whiteside, Henry Cadman.
Whitfield, Lorenzo.
Wijeyesakere, William.
Willis, Joseph Darrington.
Wood, James.

SOCIETY OF APOTHECARIES OF LONDON.—In February the following candidates passed in the subjects indicated:—

Surgery.—R. L. Anderson, Liverpool; H. Clough, Leeds; G. C. Hobbs (Section I.), St. Bartholomew's Hospital; B. Hogan, London Hospital; M. Jenkins, Guy's Hospital; J. A. Perdrau (Sections I. and II.), University College Hospital; and A. M. Weir, Royal Free Hospital.

Medicine.—R. L. Argles, St. Mary's Hospital; J. B. Cautley (Section II.), St. Bartholomew's Hospital; F. H. Fawcett, H. F. Forty, and A. R. Henchley, Middlesex Hospital; R. Holt, Royal College of Surgeons, Ireland; J. A. Perdrau (Sections I. and II.), University College Hospital; D. C. M. Shaw and H. Spinks, Manchester; F. A. St. John, St. Mary's Hospital; and L. Tong and H. J. Watts, Manchester.

Forensic Medicine.—R. L. Argles, St. Mary's Hospital; J. C. R. Curtis, University College Hospital; H. J. de Saram and F. H. Fawcett, Middlesex Hospital; E. Fryer, Guy's Hospital; A. R. Henchley, Middlesex Hospital; R. Holt, Royal College of Surgeons, Ireland; J. A. Perdrau, University College Hospital; H. Spinks, Manchester; F. A. St. John, St. Mary's Hospital; and L. Tong, Manchester.

Midwifery.—H. A. Ahrens, King's College Hospital; R. L. Argles, St. Mary's Hospital; J. S. Barnes, St. Thomas's Hospital; D. Davies, London Hospital; H. J. de Saram, F. H. Fawcett, and H. F. Forty, Middlesex Hospital; J. A. Perdrau, University College Hospital; G. M. F. Pereira, Calcutta and Royal Free Hospital; D. C. M. Shaw and L. Tong, Manchester; and W. A. H. B. Smith, King's College Hospital.

The diploma of the Society was granted to the following candidates: Messrs. E. L. Anderson, J. B. Cautley, J. C. R. Curtis, F. H. Fawcett, H. F. Forty, R. Holt, J. A. Perdrau, and L. Tong, and Miss A. M. Weir.

VACCINATION AT GLOUCESTER.—The returns presented to the Gloucester Board of Guardians on Feb. 8th relating to vaccination in the union during the first six months of 1897 showed that 571 children were unaccounted for out of 817 births. No action was taken in the matter.

BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION.—A meeting of this society was held on Jan. 28th, Mr. F. Marsh, vice-president, being in the chair. Mr. Atwood Thorne showed for the President a man, aged twenty-one years, who had been operated on for an extra-dural abscess. He had first presented himself at the Central London Throat Hospital complaining of giddiness, headache, and pain behind the right ear; there was also a history of discharge from the ear for many years. On being treated with a Leiter's coil the symptoms quickly disappeared and nothing further was done for the time being. Two months later he returned complaining of much pain in and behind the ear, giddiness, and a general feeling of depression. There was a large swelling behind and above the mastoid and a profuse purulent discharge from the ear. The swelling was at once incised. On the following day it had not completely disappeared and on cleaning the external meatus and pressing the swelling the pus was seen to exude from the tympanum and therefore to be of intracranial origin. The incision having been enlarged and the bone bared the pus was seen to be exuding from a small fistula in the squamous part of the temporal bone. This was enlarged to about the size of a penny, a bridge being left across to prevent hernia cerebri; granulations which were found on the dura mater were gently scraped away and the usual mastoid operation performed. The patient made an uninterrupted recovery and until lately has had no pain. During the last few days he has had some pain and granulations are seen to be present.—Mr. F. Marsh (Birmingham) read a paper on Five Cases of Cerebral Abscess due to Ear Disease.—Mr. Ballance read a paper on Some Lessons in the Diagnosis and Treatment of Intracranial Complications in Otitis Media gleaned from twelve fatal cases.—Dr. Milligan (Manchester) said he had only one opportunity of using anti-streptococcic serum in a case of septicæmia following chronic suppurative middle-ear disease and it had not proved to be of the slightest value. In Manchester they had had an unusual experience of cerebral abscess following influenza; in several cases the abscess had been located in the frontal lobe.—Mr. St. George Reid read the notes of a case of Traumatic Rupture of the Tympanic Membrane in a child, aged nine years, caused by a fall on the point of the chin. The child was playing on the banisters and fell over, striking the point of the chin. There was no loss of consciousness or any symptom of fractured base; slight oozing of blood was noticed from the external meatus and on examination a linear perforation was found in the posterior segment running in the direction of the fibres with raw edges from which the blood was oozing. There was slight temporary deafness but no other injury of the head whatever. He believed this to be the only case recorded of rupture of the membrane from this form of violence.—Mr. Atwood Thorne showed for the President a case of Lupus of the Nose and also a man, aged fifty years, with a Black Patch of Pigmentation on the Soft Palate, which the patient had first noticed four years previously and was uncertain whether it had increased or not. The degree of pigmentation had not altered. The patch was not raised, caused no trouble, and was only discovered in the routine examination of the mouth.—Mr. F. Marsh showed a case of Multiple Papillomata of the Larynx. The patient, a man, aged thirty-six years, had suffered for seven years from aphonia and latterly from aching pain in the throat after use of the voice which was now a hoarse whisper. A spray of pure rectified spirit had been used with some slight benefit and removal by thyrotomy was contemplated as the patient was not willing to submit to intra-laryngeal removal.—Mr. Wyatt Wingrave showed a man, aged forty-eight years, suffering from Ulceration (malignant) of the Right Tonsil extending to the faucial pillar and tongue. The patient had contracted syphilis several years previously. Microscopic examination showed well-marked stratified epithelioma.—Dr. Furniss Potter showed a case (previously exhibited at the Laryngological Society of London) of Malignant Disease Infiltrating the Left Side of the Larynx in a man aged sixty-four years.—Dr. Milligan said he would be disposed to perform a thyrotomy. In the event of the disease being found

to be much greater than appeared on laryngoscopic examination he would advise partial excision of the larynx. It seemed to him to be a case in which operation was justified.

DENTAL FEES.—At Newton Abbott on Feb. 11th a dentist sued a farmer for £10 10s. for a set of teeth. The defendant went to plaintiff for a set of teeth and a model of his mouth was taken. When they were ready he was given notice, but so far as plaintiff knew defendant never attended to have them fitted. At the expiration of six months the teeth were sent to defendant by registered post and he kept them for two years. Judgment was given for the plaintiff for £10 10s. and costs.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.—The fifth meeting of the session was held in the medical library of University College on Feb. 9th, Dr. J. E. Shaw being in the chair.—Dr. B. Baron showed a patient with Carcinoma of the Larynx.—Dr. Shaw showed a patient with Cerebellar Ataxia.—Mr. Barclay read a paper on Tuberculous Disease of the Foot (patients were shown).—Professor E. Fawcett showed numerous specimens which had recently been added to the school museum, including plaster-casts showing the position of the internal organs, models of the internal ear, a set of bones showing the centres of ossification in the humerus at various ages, and several coloured dissections of the brain.—Mr J. L. Fifth read notes on a case of Ovariotomy in which a large ovarian dermoid and three small omental dermoids were removed.—Dr. Aust Lawrence, Mr. Ewens, Mr. Morton, and Mr. Carwardine spoke on the paper.—Dr. F. H. Edgeworth read a paper on Hysterical Paroxysmal Œdema.—Dr. Michell Clarke made some remarks on the subject.

THE MEDICAL GUILD.—The annual dinner of this society was held at the Albion Hotel, Manchester, on Feb. 15th. There was a good attendance of members and their friends, including representatives of the Wigan Medical Guild and the Stockport Medical Society. In the course of the evening various speakers made references to the usefulness of the Guild and to the necessity which exists for the establishment of like societies in the more important towns of the kingdom. As a matter of fact, the Guild has successfully taken action in many cases of quackery, provident dispensaries, advertising by medical men, difficulties with midwives, medical aid societies, &c. The annual meeting was held on Jan. 28th, when the following officers were elected: President: Alderman F. H. Walmsley, J.P., M.R.C.S. Eng. Vice presidents: Mr. H. Aldred, Dr. H. Ashby, Dr. C. H. Braddon, Dr. S. Buckley, Mr. W. Crosby, Dr. J. Dreschfeld, Dr. A. M. Edge, Dr. C. E. Glascott, Dr. A. Godson, Dr. J. Hardie, Mr. F. Hepworth, Dr. T. Jones, Dr. D. Little, Dr. T. N. Orchard, Dr. D. Lloyd Roberts, Dr. H. Simpson, Mr. F. A. Southam, Dr. G. Steell, Mr. W. Whitehead, Dr. S. Woodcock, Mr. G. A. Wright, and Mr. J. H. Young. Chairman: Professor J. Dixon Mann, M.D. St. And., F.R.C.P. Lond. Vice-chairman: Dr. R. H. Wolstenholme. Treasurer: Dr. C. G. L. Skinner. Secretary: Dr. Alexander Stewart, Eccles Old-road, Pendleton, Manchester.

DIPHTHERIA IN LONDON.—In the week ending Feb. 12th, the registered deaths from diphtheria in the county of London numbered 45, having risen from 33, 36, and 42 in the preceding three weeks, and exceeding the corrected decennial average for the corresponding week by 4. Of the 45 deaths, 25 were of children aged from one to five years, 18 others were of young persons aged under twenty years; and only 2 were of persons over that age. Hackney was credited with 6 deaths, Wandsworth with 5, Fulham with 4, and Camberwell sanitary area with 3 deaths. The close of the week found 1042 diphtheria patients in hospital, the fresh admissions during the week having been 135. In the Outer Ring the mortality from the disease was very heavy, 22 deaths having been registered, of which 8 were in Willesden, 3 in Plaistow, and 2 in Walthamstow. Last week the registered deaths in the county of London from diphtheria fell to 33, and were 5 below the corrected decennial average for the particular week. There were 6 deaths of persons resident in Islington, 5 in Poplar, and 3 each in St. Pancras, Newington, and Wandsworth sanitary areas. Saturday last found 1058 cases of diphtheria under isolation in London hospitals, the admissions during the week having been 147. In the Outer Ring the registered deaths from the disease numbered 18, a number which is considerably larger, relatively, than the total for London. The West Ham district was credited with 5 of the deaths and 3 belonged to Kingston.

CLEVEDON COTTAGE HOSPITAL.—The annual report of this hospital, which has recently been issued, shows that 135 patients were admitted in 1897—a larger number than in any previous year. The receipts amounted to £396 and after all expenses were met a favourable balance of £28 remained. The committee have decided to enlarge and improve the building and an anonymous donor has already given £300 towards this object.

THE LECTURERS OF THE ST. JOHN AMBULANCE ASSOCIATION.—We have received the following statement with a request for its publication: "The Committee of the Weston-super-Mare Local Centre of the St. John Ambulance Association, having considered the Regulations for the Home Hygiene Course, the scope of the Syllabus for Lecturers' Certificate and for Elementary Certificate, feel that these cannot be efficiently carried out by anyone who has not passed through the complete curriculum of a medical education and that moreover it will be lowering of the status of the St. John Ambulance Association that non-medical persons be now for the first time admitted to the lecturing staff, which has hitherto proved itself thoroughly adequate both as to numbers, efficiency, and expert knowledge. The committee, therefore, would strongly urge the Central Executive to reconsider the new and somewhat revolutionary rules regarding the lecturers so inconsistent with the following note in the pamphlet, T/1 C. 1895: 'No lecturers whatever can be recognised who are not duly qualified medical practitioners.'"

BRITISH GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on Feb. 10th, Dr. H. Macnaughton Jones, President, being in the chair.—Mr. F. Bowreman Jessett showed specimens of Sarcoma of the Ovary, Fibromyoma of the Uterus, Uterine Myoma removed subsequently to cophorectomy, and Extra-uterine Gestation.—The Inaugural Address was delivered by the President, Dr. Macnaughton Jones, under the title of "The Position of Gynæcology To-day." The meeting was followed by a conversazione at which over 100 Fellows and guests were present. An exhibition of microscopic specimens illustrating the Pathology of the Female Pelvic Organs presented many points of interest. Over fifty specimens were shown, kindly lent by Mr. J. Bland Sutton, Mr. J. H. Targett, Dr. T. W. Eden, and Dr. Macnaughton Jones, and arranged by Dr. A. E. Giles. In addition Messrs. Arnold and Sons showed a collection of Gynæcological Instruments and Messrs. Oppenheimer showed some Therapeutic Remedies. The evening was rendered still more enjoyable by a choice selection of music, both vocal and instrumental.

MEDICAL REFORM: A MEETING AT BRADFORD.—A meeting of members of the medical profession of Bradford and neighbourhood was held on Feb. 21st at Bradford on the invitation of the Bradford and District Medico-Ethical Society. The chair was occupied by Dr. Hime, President of the society. An address was delivered by Mr. R. B. Anderson, F.R.C.S. Eng., who attended as a deputation representing the Corporate and Reform Committee. Mr. Anderson referred to most of the principal topics which by the consensus of the profession are loudly calling for reform, but his address was largely devoted to the practical methods adopted and advocated by his committee for securing the necessary reforms. In particular he dwelt on the necessity of a larger representation of the profession as distinguished from corporations on the General Medical Council. Mr. Anderson quoted By-law 15 of the Royal College of Surgeons of England, which declares that the Council will at all times protect and defend the professional interests of Fellows and Members of the College. He further drew attention to the fact that by the terms of the Medical Act, 1886, the representatives of the medical corporations on the General Medical Council are to be elected "by the following bodies"—i.e., by the members constituting respectively the twenty bodies named in the Act—while there is not one word in the Act authorising the councils or boards, &c., of those "bodies" to arrogate to themselves the sole power of electing the representatives and taking that important privilege out of the hands of the constituents.—There was an interesting discussion afterwards and a resolution was carried unanimously expressing sympathy with the efforts of the Corporate and Medical Reform Committee to secure medical reform. Some of the members expressed the desire that affiliation with a view to joint action on the subject of reform might be effected between the Bradford and other provincial societies and the London committee.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

University of London Bill.

THE Bill of the Government to make further provision with reference to the University of London was introduced in the House of Lords by the Duke of Devonshire on Monday, Feb. 21st. Introduced thus early in the session there should be no difficulty in having the Bill considered and dealt with by both Houses of Parliament.

Defective and Epileptic Children.

The Departmental Committee on the Education of Defective and Epileptic Children made its report to the Committee of Council on Education in January last and Sir John Gorst, who speaks of it as an extremely interesting one, has given an assurance that the report will be laid before Parliament directly.

Food Products Adulteration.

In the Queen's Speech at the opening of the session it was said that a measure to prevent the adulteration of food and drugs would be laid before Parliament in case of time permitting for its consideration and to this qualification several members of the House of Commons specially interested in the question took exception. Accordingly, during the debate on the address Mr. Kearley, one of their number, brought forward an amendment pressing the urgent need for a measure to check the widespread adulteration of food products and expressing regret that no assurance had been given that such a measure would be proposed by the Government during the present session of Parliament. Mr. Chaplin, President of the Local Government Board, met this amendment with the statement that he and his colleagues are most anxious to see legislation and that he himself had been for some time busily engaged in the preparation of a Bill. At the same time he gave the House to understand that there will be no chance of passing a Bill which does all that the Select Committee recommended.

HOUSE OF COMMONS.

THURSDAY, FEB. 17TH.

Lead Poisoning.

Mr. Loder asked the Home Secretary whether he could state how many deaths attributable to lead poisoning occurred last year amongst boys under eighteen years of age and whether he proposed to take any steps to prevent boys of that age from being employed in lead factories.—Sir Matthew White Ridley replied: Thirty-seven cases of lead poisoning were reported last year as occurring in factories and workshops among boys under eighteen, two of which are known to have ended fatally. I am not prepared at present to make any statement as to the steps which will be taken in regard to the processes in which lead poisoning is most common, but the whole subject is engaging my earnest attention.

The Extirpation of Rabies.

Several questions on this subject were addressed to the President of the Board of Agriculture, and in reply Mr Long said: The number of cases of rabies in dogs in Great Britain was 438 in 1896 and 151 last year when our operations began. The figures during the four quarters of the year 1897 have been 48, 42, 40, and 21, and during the first seven weeks of the current year only 5 cases are known to have occurred. The first of the series of muzzling orders which we have imposed took effect as from April 6th last, so that we have every reason to be satisfied with the progress we have made towards the eradication of rabies in this country. Under the muzzling orders now in force sporting dogs are exempted from being muzzled while being used for sporting purposes, but there is no exemption in favour of sheepdogs as such, nor would it be possible for such an exemption to be allowed consistently with the success of the operations which we have undertaken for the extirpation of rabies.

Army Medical Department.

Sir Howard Vincent asked the Under Secretary of State for War to state if there was still a dearth of suitable candidates for the Army Medical Department, and how many vacancies there were; if the standard of medical and surgical attainment had had to be lowered; and what steps the Secretary of State proposed to take in order to put the department on a better basis.—Mr. Brodrick replied: I regret to say there is still a dearth of candidates for the Army Medical Staff. There are at present thirty-eight vacancies and twenty-one probationers are available to fill them The standard of medical and surgical qualifications has not been lowered. The steps which it is intended to take in order to put the department on a better basis will shortly be announced.

Polluted Water in Factories.

Mr. MacAleese asked the Home Secretary if he had prepared an Order under the Cotton Cloth Factories Act, 1897, and, if so, will the same include and extend to Belfast linen cloth and spinning factories that were using polluted water for steam generation and use amongst workers, and when he would submit the same to the House.—Sir Matthew White Ridley said, in reply: Yes, an Order has been made and laid before Parliament. It extends to all cotton cloth factories, but I have no power to extend it to linen factories, which are subject to special rules.

FRIDAY, FEB. 18TH.

Pauper Nursing in Ireland.

Mr. Daly asked the Chief Secretary to the Lord Lieutenant of Ireland whether he was aware that an order had been issued by the Local Government Board, directing that only paid nurses shall take charge of the sick poor in Irish workhouses in future, whether Boards of Guardians in Ireland were consulted before this order was issued, and whether he would direct that half the salaries of paid nurses in Irish workhouses be paid out of the Imperial Exchequer. Mr. Gerald Balfour replied that the substitution of paid trained nurses for pauper assistance while perhaps entailing some additional expense would undoubtedly result in increased efficiency in the management of the union hospitals and the treatment of the patients therein. For many years the Local Government Board had continually impressed upon boards of guardians the necessity of providing trained or experienced nurses in workhouse infirmaries and fever hospitals, and it was in consequence of the unwillingness of some boards of guardians to carry out the recommendations of the Local Government Board to appoint qualified persons as nurses that the order in question, which was practically to the same effect as the English order, had been issued. Boards of guardians were not consulted as to the issue of the order. The question of the payment of the salaries was at present under consideration and he was not prepared to make any further statement on the subject.

Appointments.

Successful Applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ALFORD, H. T. M., L.R.C.P., M.R.C.S., has been appointed Junior Obstetric House Physician to St. Thomas's Hospital.

ASHE, C. S., M.B., Ch.B. Vict., has been appointed a Medical Officer to the Dispensary of the Manchester Children's Hospital.

BABINGTON, S. N., L.R.C.P., M.R.C.S., has been appointed Junior Ophthalmic House Surgeon to St. Thomas's Hospital.

BILLIALD, R. A., L.R.C.P. Lond., M.R.C.S., has been re-appointed an Honorary Medical Officer for the Victoria Cottage Hospital, Kington.

BLAKISTON, A. A., M.R.C.S., has been appointed Medical Officer for the Fourth Sanitary District of the Shepton Mallet Union.

BRAINE-HARTNELL, GEORGE M. P., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer and Superintendent to the Worcester County and City Lunatic Asylum.

BUBB, WILLIAM, M.R.C.S., L.R.C.P. Lond., has been appointed Senior Medical Officer and Deputy Superintendent to the Worcester County and City Lunatic Asylum.

BUSH, J. PAUL, M.R.C.S., has been appointed Lecturer on Operative Surgery for the University College, Bristol.

BYERS, JOHN W., Professor, M.A., M.D., M.A.O. (*honoris causâ*) R.W.I., has been re-appointed Examiner in Obstetric Medicine in the Royal University of Ireland.

COBB, E. H., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

DEBENHAM, H. K., M.R.C.S., has been appointed a Consulting Medical Officer for the Victoria Cottage Hospital, Kington.

FLUX, GEORGE BELBEN, M.D. Brux., M.R.C.S., L.R.C.P., L.S.A., has been appointed Anæsthetist to the Great Northern Central Hospital, London.

GIBBON, A. H., L.R.C.P. Edin., L.R.C.S Edin., has been re-appointed Clinical Assistant in the Electrical Department to St. Thomas's Hospital.

GRANT, A. J., M.D. Brux., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Throat to St. Thomas's Hospital.

GREAVES, F. L. A., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

GREG, A. H., B.A. Camb., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

GREGORY, W. H., M.D. Edin., has been appointed Medical Officer for the No. 4 Sanitary District, and Vaccination Officer for No. 2 Sanitary District of the Beverley Union, vice Henry Walker, resigned.

HALL, J. S., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

HAMILTON, R. K., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Hasland Sanitary District of the Chesterfield Union.

HARDENBERG, E. F. H., M.B. Lond., M.R.C.S., L.R.C.P., has been appointed Certifying Factory Surgeon for the Watford District.

HASLAM, H. C., M.A., M.B., B.C. Camb., L.R.C.P., M.R.C.S., has been re-appointed House Physician to St. Thomas's Hospital.

HEWITT, H. E., L.R.C.P., M.R.C.S., has been re-appointed House Physician to St. Thomas's Hospital.

LEVASON, A. G., L.D.S.R.C.S. Irel., has been re-appointed an Honorary Dental Surgeon to the Victoria Cottage Hospital, Kington.

LEVASON, P. G., L.D.S.R.C.S. Eng., has been re-appointed an Honorary Dental Surgeon to the Victoria Cottage Hospital, Kington.

MARRIAGE, H. J., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

MARTIN, F. R., B.A. Camb., L.R.C.P., M.R.C.S., has been re-appointed Clinical Assistant in the Special Department for Diseases of the Ear to St. Thomas's Hospital.

MCCLEAN, J. F., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

MEARNS, W., M.D. Aberd., has been re-appointed an Honorary Medical Officer for the Gateshead Dispensary.

MICHELL, J. C., M.R.C.S., has been appointed Medical Officer of Health for the Lynton Urban Sanitary District, vice D. L. Hubbard, resigned.

MILLAR, A. F., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Throat to St. Thomas's Hospital.

MUIR, J. C., M.B. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed a Junior Resident Medical Officer to the Manchester Children's Hospital.

NEWCOMBE, F. W., M.D. Durh., has been re-appointed an Honorary Medical Officer for the Gateshead Dispensary.

NICHOLLS, W. J., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Fourth Sanitary District of the Chipping Norton Union.

OSBORNE, A. A., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Skin to St. Thomas's Hospital.

PARSONS, A. C., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Skin to St. Thomas's Hospital.

POPE, H. B., M.D. Dubl., has been appointed an Honorary Medical Officer for the Victoria Cottage Hospital, Kington.

PULFORD, HERBERT, M.A., M.B., B.C. Cantab., has been appointed Second Assistant Medical Officer to the Worcester County and City Lunatic Asylum.

REYNOLDS, J. H., M.B., C.M. Edin., has been appointed a Junior House Surgeon to the Miller Hospital, Greenwich.

REYNOLDS, C. A., B.A., M.B., B.Ch. Oxon., has been appointed Clinical Assistant in the Special Department for Diseases of the Ear to St. Thomas's Hospital.

ROBINSON, A. C., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

ROWNTHAM, A. J., M.R.C.S., has been re-appointed Medical Officer of Health for the Newton-on-Trent Sanitary District.

SANDBERGH, H. H., B.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

SCOTT, H. H., L.R.C.P., M.R.C.S., has been appointed House Physician to St. Thomas's Hospital.

SHEA, H. F., M.B., B.S. Durh., L.R.C.P., M.R.C.S., has been appointed House Physician to St. Thomas's Hospital.

SHIACH, S. A., M.B., C.M. Edin., has been appointed Medical Officer for the Llanishen Sanitary District of the Cardiff Union.

SLADER, G. W., L.R.C.S. Irel., has been re-appointed Medical Officer for the Blyton Sanitary District of Gainsborough Union.

SMITH, J. LORRAIN, M.A., M.D. Edin., has been re-appointed Examiner in Pathology at the Royal University of Ireland.

SMYTH, J. C., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Wells Rural District Council.

STAUNTON, FRED. W., M.B., B.Ch. Dubl., has been appointed a Medical Officer to the Waterford Gaol, vice W. L. Mackesy.

STEPHENSON, W., M.R.C.S., has been appointed Medical Officer of Health by the Beverley Rural District Council, vice H. Walker, resigned.

THOMSON, STCLAIR, M.D. Lond., F.R.C.S. Eng., has been appointed Surgeon to the Royal Ear Hospital, vice E. Cresswell Baber, resigned.

TURNER, S. D., L.R.C.P., M.R.C.S., has been appointed Senior Obstetric House Physician to St. Thomas's Hospital.

TYRRELL, F. A. C., B.A., M.B., B.C. Camb., L.R.C.P., M.R.C.S. has been appointed Senior Ophthalmic House Surgeon to the St. Thomas's Hospital.

WEBSTER, T., M.R.C.S., has been re-appointed a Medical Officer by the Bewdley Town Council.

WHITLA, W., Professor, M.A. (*honoris causâ*), M.D., R.W.I., has been re-appointed Examiner in Materia Medica at the Royal University of Ireland.

WYLLYS, HENRY J. M., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed House Surgeon to the Norfolk and Norwich Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BEDFORD COLLEGE, LONDON, FOR WOMEN, York-place, Baker-street, W.—Professorship in Zoology.

BELGRAVE HOSPITAL FOR CHILDREN, 77 and 79, Gloucester-street, London.—Surgeon to Out-patients. Also House Surgeon for six months. Board, lodging, and washing provided.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES, John Bright street, Birmingham.—Clinical Assistant for three months.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY, Chesterfield.—Resident Junior House Surgeon and Dispenser. Salary £50 per annum, with board, apartments, and laundress.

COTON HILL REGISTERED HOSPITAL FOR MENTAL DISEASES.—Assistant Medical Officer. Salary £100 per annum, with two annual increases of £25 each to a maximum of £150, with board, lodging, and washing.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Glamis-road, Shadwell, E.—House Surgeon for six months. Board, residence, &c., are provided, and an honorarium of 15 guineas, conditionally. Also Casualty Officer for six months. Salary at the rate of £100 per annum.

FINSBURY DISPENSARY, Brewer-street, Goswell-road, E.C.—Physician. An honorarium of £40 will be paid during the pleasure of the Committee.

GENERAL INFIRMARY AT GLOUCESTER AND THE GLOUCESTERSHIRE EYE INSTITUTION.—Surgeon. Also House Surgeon. Salary £100 per annum, with board, residence, and washing. Also Assistant House Surgeon. Board, residence, and washing provided.

GUEST HOSPITAL, Dudley.—Assistant House Surgeon, for six months. Board, lodging, and washing in the hospital provided.

LEICESTER INFIRMARY.—Surgical Dresser, and also a Clinical Clerk, for six months each.

LIVERPOOL ROYAL INFIRMARY.—Honorary Gynæcological Surgeon.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W.—Assistant Resident Medical Officer, for six months. Residence in the hospital, board, and washing provided, and an honorarium given conditionally.

MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST.—Resident Medical Officer at Bowden, Cheshire, for twelve months. Salary £60 per annum, with board, apartments, and washing.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—House Physician, House Surgeon, Assistant House Physician, and Assistant House Surgeon, for six months. The House Physician and House Surgeon will each receive a salary at the rate of £40 a year. The Assistant House Physician and Assistant House Surgeon will each receive a salary at the rate of £20 a year.

NORFOLK AND NORWICH HOSPITAL.—House Physicians, for two years, unmarried. Salary £60 per annum, with board, lodging, and washing.

NORTH LONDON HOSPITAL FOR CONSUMPTION, Hampstead, N.W.—Resident Medical Officer, for one year. Honorarium £40 per annum, with board, lodging, &c., in the hospital. Applications to the Acting Secretary, 41, Fitzroy-square, W.

PARISH OF ST. GILES, Camberwell.—Assistant Medical Officer for the Infirmary at Havil-street, Camberwell, and the Workhouse at Gordon-road, Peckham; also for relief duty at the Constance-road Workhouse of the Parish for one year only. Salary £50, with apartments, board, and washing. Applications to the Clerk to the Guardians, 29, Peckham-road, S.E.

ROCHFORD UNION.—District Medical Officer and Public Vaccinator for the Hadleigh District. Salary £45 per annum, with certain extra fees and subject to statutory requirements. Applications to the Clerk to the Guardians, Southend-on-Sea.

ROYAL HALIFAX INFIRMARY.—Honorary Ophthalmic Surgeon.

ROYAL HOSPITAL FOR SICK CHILDREN, Glasgow.—House Physician. Salary £50, with board and washing.

ROYAL INFIRMARY, Hull.—Senior House Surgeon, unmarried. Salary 100 guineas, with board and furnished apartments.

ROYAL SOUTHERN HOSPITAL, Liverpool.—Honorary Surgeon.

ROYAL SURREY COUNTY HOSPITAL, Guildford.—Resident House Surgeon. Salary £80, and board, residence, and laundry provided. Also Assistant House Surgeon. Salary £30, and board, residence, and laundry provided.

SHEFFIELD UNION WORKHOUSE INFIRMARY.—Junior Assistant Medical Officer, for the Workhouse Infirmary, Fir Vale, Sheffield, for six months, unmarried. Residence in the Infirmary, furnished apartments, board, and washing provided, and an honorarium of £12 granted. Applications to the Clerk to the Guardians, Union Offices, West Bar, Sheffield.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician and House Surgeon for six months.

WESTON-SUPER-MARE HOSPITAL.—House Surgeon, unmarried. Salary £60 per annum, with board and residence in the hospital.

WORCESTER COUNTY AND CITY LUNATIC ASYLUM, Powick, near Worcester.—Third Assistant Medical Officer, unmarried. Salary £100 per annum, rising to £120 in a year, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTHS.

BARTLETT.—On Feb. 18th, at The Limes, Romsey, Hampshire, the wife of Ralph Clarke Bartlett, M.R.C.S., L.R.C.P., of a son.

BROADBENT.—On Feb. 18th, at Seymour-street, Portman-square, the wife of John F. H. Broadbent, M.D., of a daughter.

FISHER.—On Feb. 4th, at Westbury-on-Severn, Glos., the wife of Reginald W. Fisher, M.R.C.S., L.R.C.P., of a daughter.

FOOT.—On Feb. 21st, at Church House, Pulborough, Sussex, the wife of Ernest Foot, M.R.C.S., of a daughter.

GAGE-BROWN.—On the 20th inst., at 85, Cadogan-place, S.W., the wife of Dr. C. H. Gage-Brown, of a son.

PAYNE.—On Feb. 20th, at Chichele-road, Cricklewood, London, N.W., the wife of E. Marten Payne, M.B. Aberd., of a daughter.

PESKETT.—On Feb. 14th, at Oxford-street, Nottingham, the wife of A. W. Chalmers Peskett, M.A., M.B., B.C. Cantab., of a son.

PRITCHARD.—On Feb. 21st, at St. Giles-street, Norwich, the wife of Eric Law Pritchard, M.D., of a daughter.

RAY.—On Feb. 18th, at Southery, Norfolk, the wife of Walter J. O. Ray, M.R.C.S., L.R.C.P., of a son.

SHELSWELL.—On Feb. 19th, at Mitcham, the wife of Oscar B. Shelswell, M.R.C.S., L.R.C.P., of a daughter.

MARRIAGES.

FINEGAN—MCGLYNN.—On Feb. 17th, at University Chapel, St. Stephen's-green, Dublin, Patrick Joseph Finegan, L.R.C.P., L.R.C.S. Irel., J.P., Abbey View, Carlingford, Co. Louth, to Mary J. McGlynn, only daughter of the late Edward McGlynn, of Letterkenny.

GORNALL—DAWSON.—On Feb. 17th, at St. Margaret's Church, Binsey, Oxford, John Guest Gornall, M.A., M.B. Cantab., of Latchford, Warrington, to Constance Maria Dawson, third daughter of the late Frederick Hill Dawson, of Cumnor, Oxfordshire.

HALL—COOPER.—On Feb. 22nd, at St. Margaret's, Rochester, Surgeon-Captain R. J. D. Hall, A.M.S., son of the late Major Hall, of the Bombay Army, to Daisy Isabel Annie, youngest daughter of Lieutenant-Colonel Cooper, late R.M.L.I., of Beaconsfield House, Rochester.

HUTLEY—PAGE.—On Feb. 18th, at St. Saviour's, South Hampstead, by Rev. John Hose, M.A., Charles William Hutley, of Askern, Yorks., eldest son of Charles Hutley, Esq., of Wigboro', Colchester, Essex, to Kate, daughter of the late B. Page, Esq., of Tolleshunt D'Arcy, Essex.

DEATHS.

STONEY.—On Feb. 20th, at Millom, Cumberland, suddenly, Jessie Mary (Mamie), the beloved and eldest daughter of Percy Butler and Mary Stoney, aged 25 years.

WAKEFIELD.—On Feb. 19th, at the Lower Green House, Painswick, Gloucestershire, William Wakefield, M.D.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (28th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.).

WEDNESDAY (2nd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.).

THURSDAY (3rd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.).

FRIDAY (4th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (5th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (28th).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. **Mr. F** Treves: Abdominal Section as a Medical Measure.

TUESDAY (1st).—ROENTGEN SOCIETY (Medical Society's Rooms, 11, Chandos-st., W.).—7.30 P.M. General Meeting. Paper:—Mr. J. H. Gardiner: Photographic Activity and Penetration of Roentgen Rays at different Vacua. And other papers by Mr. W. Noble and Mr. H. Edwards (Birmingham). Mr. Isenthal will show some New Apparatus.

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Mr. T. W. W. Stephens and Mr. W. Meyers: On Test-tube Reactions between Cobra Poison and its Antitoxin.—Mr. G. Heaton: (1) Circumscribed Traumatic Aneurysm of the Innominate Artery; (2) Congenital Sarcoma of the Liver.—Mr. C. P. White: A Case of Ulceration of the Small Intestine.—Mr. T. Carwardine: A Pendulous Hydatid Cyst of the Liver resembling an enlarged Gall Bladder.—Mr. C. B. Lockwood: A Retro-peritoneal Cyst supposed to have originated in the remains of the Wolffian Body.—Dr. W. Hunter: A Complete Case of Acromegaly with Casts and Formalin Preparations.—Dr. R. Crawfurd: A Heart with a Tumour of the Pulmonary Valves.—Dr. P. Weber: Speckled Kidneys due to an Irregular Fatty Degeneration, possibly caused by Plugging of Small Blood-vessels shortly before death.—Mr. S. G. Shattock: Mycetoma Papillomatosum. Card Specimens: Mr. C. F. Beadles: (1) Primary Carcinoma of Kidney; (2) Malignant Stricture of Sigmoid Flexure.

WEDNESDAY (2nd).—BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Adjourned Discussion on the Treatment of Cardiac and Circulatory Affections by Baths, Exercises, and Climate (reopened by Mr. Sansome). Dr. W. Bain (Harrogate): The Action of some of the Natural Mineral Waters on the Flow of Bile—an Experimental Research.

THURSDAY (3rd).—HARVEIAN SOCIETY OF LONDON (Stafford Rooms, Titchborne-street, W.).—8.30 P.M. Clinical Evening.

FRIDAY (4th).—WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—Clinical Evening. Cases will be shown by Dr. Potter, Dr. S. Taylor, and others.

WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road, S.E.).—8.15 P.M. Clinical Cases and Specimens will be shown by Dr. Toogood, Dr. Scholefield, Dr. Tayler, Dr. Dockrell, Mr. E. Clarke, Mr. Joscelyne.

LECTURES, ADDRESSES, DEMONSTRATIONS, ETC.

MONDAY (28th).—ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. F. G. Parsons: The Muscles of Mammals, with special relation to Human Myology.

LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. G. Stoker: Chronic Glandular Disease of the Nose and Naso-pharynx.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Mr. A. Wynter Blyth: The Law Relating to the Supervision of Food Supply.

TUESDAY (1st).—WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street).—4.30 P.M. Dr. T. D. Savill: On Cases of Facial Paralysis and Monoplegia.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Mr. Victor Horsley: Surgery of the Nervous System.

CITY ORTHOPÆDIC HOSPITAL.—5 P.M. Mr. Noble Smith: The Use of Apparatus in Orthopædic Surgery.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Stupor; Katatonia; Dementia and Senile Insanity.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Abraham: Atropic Conditions.

ROYAL INSTITUTION.—3 P.M. Prof. E. Ray Lankester: The Simplest Living Things.

WEDNESDAY (2nd).—ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. F. G. Parsons: The Muscles of Mammals, with special relation to Human Myology.

LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-st., W., 4.30 P.M., Prof. A. Wynter Blyth: House Drainage.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (Brompton).—4 P.M. Dr. Arkle: Mitral Disease.

EVELINA HOSPITAL (Southwark-bridge-road, S.E.).—4.30 P.M. Mr. F. S. Eve: Mastoid Abscess, its Complications and Treatment. (Post-Graduate Course.)

ST. MARY'S HOSPITAL MEDICAL SCHOOL (Paddington, W.).—3.15 P.M. Sir William Broadbent: On a Case of Pneumonia with Abortive Crisis and Premature Resolution, followed by Suppuration of Bronchial Glands.

THURSDAY (3rd).—CHARING-CROSS HOSPITAL.—4 P.M. Dr. Mott: Demonstration of Medical Cases. (Post-graduate Class.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Dr. Barlow.

LONDON POST-GRADUATE COURSE.—Central London Sick Asylum, Cleveland-st., W.—5.30 P.M., Mr. A. Pearce Gould: Clinical Lecture.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—Mr. A. Wynter Blyth: Sanitary Laws and Regulations Governing the Metropolis.

ROYAL INSTITUTION.—3 P.M. Prof. J. A. Fleming: Recent Researches in Magnetism and Diamagnetism.

FRIDAY (4th).—ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. F. G. Parsons: The Muscles of Mammals with special relation to Human Myology.

LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Anthrax and Malignant Œdema.

ROYAL INSTITUTION.—9 P.M. Prof. T. E. Thorpe: Some Recent Results of Physico-Chemical Inquiry.

EAST LONDON HOSPITAL FOR CHILDREN (Shadwell, E.).—4 P.M. Mr. R. W. Parker: On Hip Disease.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

THE INDEX TO THE LANCET.

THE Index to Vol. II. of 1897, which was completed with the issue of Dec. 25th, and the Title-page to the Volume, were given in THE LANCET of Jan. 1st.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1897 are now ready. Bound in cloth, gilt lettered, price 18*s*., carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s*., by post 2*s*. 3*d*.

To be obtained on application to the Manager, accompanied by remittance.

DR. SCHLATTER'S CASE OF EXCISION OF THE STOMACH.

To the Editors of THE LANCET.

SIRS,—Can any of your readers inform me from their experience of analogous cases whether it is probable that the portion of small gut which now does service as stomach in the case of the Swiss woman will acquire the same histological character as the stomach?

I am, Sirs, yours faithfully,

Eastbourne, Feb. 22nd, 1898. O. H.

"THE CARE OF CHANCERY LUNATICS."

To the Editors of THE LANCET.

SIRS,—In answer to the question asked by "Invicta" in THE LANCET of Feb. 19th (p. 553) as to the means employed to obtain the care of Chancery lunatics, I may state that the "committee of the person" has the care of the person of the lunatic and may determine the lunatic's residence subject to the control of the Court. To obtain the care of one of these persons one requires interest with the "committee" or the Board of Visitors. Only one such person may be received into an unlicensed house, but the Lunacy Commissioners have the power of allowing a second patient to be taken "under special circumstances." I am, Sirs, yours faithfully,

Feb. 19th, 1898. L. H. L.

INDIARUBBER TYRES FOR CARRIAGE WHEELS.

THE Cortland Wagon Company, of Henrietta-street, Covent-garden, W.C., have submitted to us a section of an improved patent solid rubber tyre suitable for use on vehicles on country roads which they think is specially worth the attention of the members of the medical profession. The solid rubber employed appears to be of a very good quality and to stand the necessary pressure upon its rounded part of contact with the road without unduly "spreading," so that cutting by the steel rim into which it is fixed need scarcely be apprehended. The tyre is held on by two steel wires which are electrically welded and are guaranteed not to come off. The Cortland Wagon Company offer to supply the profession free of charge with 100 sets of these tyres fixed to the first 100 of their carriages ordered between March 1st and June 1st.

"A MODEL COTTAGE HOSPITAL."

IN response to "R.'s" letter which appeared in our columns last week we are asked to say that the matron of the Horwich Cottage Hospital belonging to the Lancashire and Yorkshire Railway will be very pleased to give any information respecting the construction and arrangements of "a complete and perfect cottage hospital," containing seven beds belonging to the London and Yorkshire Railway Company.

THE YARROW HOME FOR CONVALESCENT CHILDREN.

To the Editors of THE LANCET.

SIRS,—You were kind enough to publish in THE LANCET of March 27th, 1897, a description of the Yarrow Home for Convalescent Children at Broadstairs. I have the pleasure to report that since the opening of this institution a little over two years ago, no less a number than 1299 children have been benefited by a stay there. It will be remembered the home is fully endowed and no subscriptions are required, also that it is not intended for the very poor but for children who have been respectably brought up and whose parents cannot afford to send them to the seaside entirely at their own expense. During the summer months the applications for admission are far in excess of the capabilities of the home, but in winter it is only partly filled and the trustees are most anxious to maintain its utility equally throughout the year. There is little doubt that the falling off in applications during the winter may arise from the fact that the home is thought not to be a very desirable resort during the inclement part of the year, but such is not the case. The building is thoroughly warmed and ventilated, a healthy temperature being maintained throughout, and there are play corridors within and covered playgrounds without. The grounds are planted and well sheltered and there are but very few days in the year when children cannot enjoy the fresh air, even when the weather debars them from going to the sea-front.

I am, Sirs, yours faithfully,

T. FREDK. MYERS,

73A, Queen Victoria-street, E.C. Secretary of the Yarrow Home.

"THE DEFINITION OF PUERPERAL FEVER."

To the Editors of THE LANCET.

SIRS,—An appeal for a definition of puerperal fever comes once again. "Inquirer" wishes to know whether all cases of peritonitis occurring at childbirth should be reported as cases of puerperal fever under the Notification Act. Thirty or forty years ago almost every condition that arose during the puerperal state, if it showed an increased pulse-rate and manifested such symptoms of rise of temperature as the days of no thermometer allowed the practitioner, was called puerperal fever. In "Illustrations of Puerperal Diseases," by R. Uvedale West, vice-president of the Obstetrical Society, published in 1862, we find puerperal fevers grouped under headings as follows: "(*a*) Cerebral Excitement and Disorders of the Mind in the Puerperal State regarded as varieties of Puerperal Fever; (*b*) Further Examples of the Pyogenic Diathesis; (*c*) Diarrhœa as a Variety of Puerperal Fever; (*d*) Puerperal Fever regarded as a Sthenic Disease; (*e*) Puerperal Fever regarded as an Asthenic Disease; (*f*) Puerperal Fever regarded as a Contagious and Epidemic Disease; (*g*) The Influence of the Puerperal State on Pre-existing Disease." Pneumonia, milk-fever, or abscess of breast, "diarrhœa with griping fever," dysentery, intestinal fever, abscess of the thigh, phlebitis, ephemeral fever, pleurisy, rheumatic fever are all referred to as various forms and manifestations of puerperal fever. At this same period comparatively little notice was taken of vaginal discharge. It was only noted as being increased or diminished. No treatment per vaginam seems to have been practised, not even plain douching. Since those days we have learnt that abscess of the breast gives a rise of temperature (as seen by a thermometer and not guessed at) which need not of necessity have the slightest association with any state of the uterus beyond a sympathetic one; and we know that it is possible for peritonitis and many other affections to exist before or during gestation and even after parturition through no fault of the uterus and without there being any occasion for notifying the case as one of puerperal fever. When we come to an age necessitating Notification Acts we ought to be perfect in our definitions of the diseases named under them. That puerperal fever has been named for notification but never definitely defined is a fact that has been brought before us with painful iteration. Dr. Rentoul not long ago accused Dr. Cullingworth of not knowing the meaning of the term after the latter had given a presidential address on mortality from puerperal fever. The Notification Act was brought into force for the purpose of preventing the spread of diseases that are contagious or infectious. This fact should help us to define puerperal fever which has been included under the Act. If your correspondent's case was a contagious or infectious one in the sense that typical puerperal septicæmia is, then it was one of puerperal fever. If the discharges were such as would give typical puerperal fever to another, through vaginal examinations, then the case ought to have been notified. Peritonitis pure and simple, having no relation to disease of the uterus, could not be included under puerperal fevers—could not come "within the meaning of the Act." I beg to offer the following definition of puerperal fever. Puerperal fever is a name used to express certain conditions peculiar to the lying-in period that are caused by septic intoxication, which intoxication is produced by outside or inside septic or infective matter getting into the circulation by way of the uterus or vagina, and the state of the parts is such that infective products may find their way to the exterior to produce the same conditions in others who are lying-in. Diphtheria and erysipelas are said to cause puerperal fever, but the kind is entirely different to that of ordinary puerperal septicæmia. They really cause diphtheria and erysipelas of the generative passages and they may or may not be complicated with septicæmia. The majority of puerperal fevers are doubtless caused by much the same organisms as would cause septicæmia through other channels, such as wounds in various parts of the body. The discharge from a patient suffering from puerperal septicæmia will render ordinary wounds septic and the discharge from unhealthy wounds will give puerperal fever. Foul smells from a faulty sanitary system may septicise a wound or post-parturient uterus and give septicæmia or puerperal septicæmia as the case may be.

I am, Sirs, yours faithfully,

HAYDN BROWN,

Author of "Economics and Antiseptics in Midwifery Practice."

Feb. 14th, 1898.

EARLY CONJUGAL INSTINCT.

To the Editors of THE LANCET.

SIRS,—You express surprise in your issue of Feb. 12th, in your review of Mrs. Fowler's "Manual of Mental Science," &c., at the likeness of a boy of eight years of age being given as an example of the large development of the phrenological organ of "conjugality." Well, speaking for myself I can only say that at six years of age, though of course utterly devoid of all sexual feeling, I was most violently in love with a girl slightly my senior, and having to part with her after being with her caused me very painful feelings for a long time after, whilst the idea of having and possessing a mate to love and cherish and be part of myself was always one of the dominating thoughts of my boyhood; and a phrenologist whom I once visited when nearly twenty years of age marked philoprogenitiveness large and conjugality full. Therefore as I had possessed this amiable dream for years I do not suppose they had only then recently developed. I am, Sirs, yours faithfully,

Feb. 13th, 1898. CONJUGALITY.

MALE AND FEMALE NURSES' ASSOCIATION.

Mr. W. E. Langton (Secretary of the Male and Female Nurses' Association, 69, Wigmore-street, W.) writes: It has come to the knowledge of my committee that statements have been made to medical men and others calculated to injure the work carried on by the Male and Female Nurses' Association at No. 69, Wigmore-street, Cavendish-square, W. It is obviously for the benefit of the medical profession at large that an association of this character should be protected from attacks of the above description and I feel sure that any of your readers to whom any of the statements complained of have been made will give such information to me as will enable my committee to take proper action against the offending parties. I need hardly say the association courts the fullest investigation.

PRINCIPAL AND ASSISTANT: THE NEED FOR A BOND.

To the Editors of THE LANCET.

SIRS,—As formerly an unqualified assistant I have been much interested in the correspondence relating thereto. This question may be regarded as settled for the present by law of the General Medical Council; that it is settled in equity I do not at all admit. The practical result is that medical practitioners cannot safely employ unqualified assistants. But the engagement of qualified assistants brings its own dangers and possibilities of injury to the general practitioner and it is in relation to this that I wish to ask you a question. Suppose a qualified assistant, after being with an employer a sufficient time to get a thorough introduction to the practice, left the said principal and set up for himself in opposition to the above-named employer, perhaps only a few hundred yards from his employer's place of business, and this either with or without his having signed the usual bond, then would this be infamous conduct as described by the General Medical Council, and, if not, why not? It appears to me that this is a question to be answered. The public have been protected from the unqualified assistant though not from the unqualified quack or prescribing chemist. Who is going to protect *us* from the qualified poacher? The case I have put suppositiously is unfortunately of every-day occurrence and has happened to myself. I am, Sirs, yours faithfully,

Feb. 23rd, 1898. GENERAL PRACTITIONER.

**** The terms of agreement between principal and assistant can surely prevent the occurrence. If the principal does not insist upon a bond nothing can help him. He is no more to be pitied if he is taken advantage of than if he lost his fortune by the burning of a house or property unprotected by insurance. We may think badly of the assistant who takes the advantage, but we cannot on business grounds sympathise with the improvident principal. If there is a bond with an adequate penalty for infraction surely the remedy lies in the principal's hands.—ED. L.

PERITYPHLITIS.

(By a Medical Man who has had it.)

Of human inflictions, and woes, and diseases,
From tuberculosis to innocent sneezes,
From strength-sapping typhoid to plain indigestion,
From tabes to toothache, there can be no question,
Though bad in their way, yet not one of them quite is
So utterly horrid as perityphlitis.

They've altered its name now, and so it thought right is
To know this infliction as appendicitis.
(It matters not two rows of pins what its name is;
Its horrid, depressing effect just the same is.)
All those who affirm that "Whatever is right is"
Can never have suffered from perityphlitis.

It comes not in stages; 'tis all one long stage on
(What's called by the doctors a "sudden invasion").
You feel like a worm all at once. I affirm you
Are limp as chewed string is or even chewed worm, too!
Your legs are like canes, and your walk quite a sight is,
When six weeks you've had of this perityphlitis.

What's worse than the pain, and the weakness, and fright is
The heartsick delays of this perityphlitis.
And when it is over the worst part perhaps is
The spending your days looking out for relapses.
My prayer then at noonday, and morning, and night is,
Oh, spare all my friends from this perityphlitis.

Feb. 21st, 1898. C. J.

VACCINATION EXTRAORDINARY.

SOME notion of what sound medicine has to struggle against in Southern Europe may be formed from a ghastly announcement that reaches us from Thessaly, where in the village of Kanditra, in the absence of the medical man, a priest undertook to vaccinate all requiring the operation as a prophylactic. The "papao" (or holy father), with a zeal which was not by any means according to knowledge, did not use the vaccine lymph of regular practice, but the actual virus of small-pox. In this way he actually injected the variolous pus directly into the bodies of healthy subjects (mostly peasants) to the number of forty, nearly all of whom have since died. The dismay of the medical man on his return may be imagined. Meanwhile the "papao" is awaiting his trial in the local prison.

OPTICAL APPARATUS.

WE have received from the well-known firm of manufacturing opticians, Messrs. Ross, Limited, of 111, New Bond-street, a very comprehensive and well drawn up catalogue of the various instruments which this firm makes. The excellence of the lenses used in the cameras is attested to by the admirable reproductions on thick toned paper in this catalogue. The Ross "photoscope" for snap-shot photographs—a combined marine, field, or opera-glass and camera—is well worth mentioning, as is also the "twin lens" camera. The list also includes microscopes constructed especially for bacteriological work.

Gentian.—The climate is mild. The city is surrounded by vineyard slopes 800 feet above the sea and all the atmospheric conditions are excellent. The cost of living and of education in Germany is always cheap compared with the cost in English cities and there are many high-class educational establishments in Stuttgart. Foreign diplomas are not legally recognised in Germany as entitling their holders to practise medicine and English medical men desiring to practise have to pass all the examinations of the German curriculum. The articles alluded to will be found in THE LANCET of Sept. 5th and Oct. 3rd, 1896, the information in them being supplemented by correspondence published in various issues of the same year and of 1897.

F.R.C.S.—Chelidonium majus or garden celandine has been used externally and internally in the treatment of malignant disease, but we are not aware that there is any ground for thinking the drug of much value. Dr. Dennisenko has, however, recorded his experiences in the Russian *Vratch*, which have a different signification. There is an article in the *Therapeutic Gazette* of April 15th, 1897, by Dr. Spivak, which our correspondent might consult. Messrs. Parke, Davis and Co., of 21, North Audley-street, prepare fluid extracts of chelidonium.

Walworth.—It is regrettable that the letter should have been written, but the writer was evidently under certain misapprehensions. Our correspondent is advised to write to him explaining exactly what happened as briefly and clearly as he has explained the matter to us. It would be a pity to allow the episode to become a ground for permanent quarrel.

Sigma.—(1) The M.D. Brux. is registrable if obtained prior to June 25th, 1886. (2) The source of a degree ought in our opinion and as a matter of taste to be added to the title, but there is no legal compulsion in the matter. (3) Yes.

Puzzled.—We do not see any harm in the announcement that a treatment recognised as useful in certain medical and surgical conditions is carried on by a medical man.

L.R.C.P. Edin., &c.—We consider that a medical man is not justified in administering gas for, or otherwise working with, an unqualified dentist.

Rufus.—There can be no possible objection to a properly qualified man practising with such limitations.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 24th, 1898.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain-fall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Wet Bulb.	Dry Bulb.	Remarks at 8.30 a.m.
Feb. 18	29·81	N.E.	0·17	45	42	41	41	42	Raining
,, 19	29·94	N.	0·04	68	44	33	33	35	Fine
,, 20	29·37	W.	0·08	67	47	35	42	44	Raining
,, 21	29·17	E.	....	63	41	31	33	34	Overcast
,, 22	29·33	N.E.	....	56	44	33	33	36	Snowing
,, 23	29·73	N.E.	....	75	46	35	36	37	Cloudy
,, 24	30·07	N.E.	....	72	44	34	34	36	Cloudy

During the week marked copies of the following newspapers have been received: *Alyreton Journal, Colchester Mercury, Bury Guardian, Derby Daily Telegraph, Grantham Times, Wolverhampton Chronicle, Royal Cornwall Gazette, Herald of Wales, Isle of Wight Observer, St. Andrews Citizen, Ilfracombe Gazette, Times of India, Pioneer Mail, Derbyshire Times, Worcester Herald, Biggleswade Chronicle, Liverpool Daily Post, Leicester Post, Sussex Daily News, Berkshire Chronicle, Architect, Northampton Mercury, Newbury Weekly News, Builder, Blackburn Standard, Citizen, Norfolk Chronicle, Hereford Times, Leek Times, Salisbury Journal, Essex County Standard, Brighton Herald, Somerset County Herald, Lancashire Express, Eastern Daily News, Bridgwater Independent, Critic, Western Morning News, Bristol Mercury, South Wales Daily News, Le Temps, Grimsby News, Birmingham Gazette, Dundee Courier, Sheffield Independent, Leeds Mercury, Glasgow Herald, Scarborough Evening News, Manchester Guardian, Bedford Standard, Yorkshire Post, Oban Times, Worcester Chronicle, Cheltenham Mercury, Brighton Gazette, Sanitary Record, City Press, Mining Journal, Reading Mercury, Public Health Engineer, Local Government Chronicle, Hertfordshire Mercury, Berwick Journal, Sporting Chronicle, Siam Free Press, Local Government Journal, Surrey Advertiser, Weekly Free Press and Aberdeen Herald, Sun, West Middlesex Herald, Stowmarket Courier, Kelso Mail, Scotsman, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Messrs. Arnold and Sons, Lond.; The Article Club, Lond., Secretary of.

B.—Mr. J. F. de C. Boscawen, Cornwall; Major W. A. C. Brown, Byfleet; Mons. O. Berthier, Paris; Mr. W. Brown, Greenock; Dr. F. T. Bond, Gloucester; Birmingham and Midland Hospital for Skin Diseases, Hon. Secretary of; Messrs. Battley and Watts, Lond.; Mr. S. H. Benson, Lond.; Bury Dispensary Hospital, Secretary of; Berkefeld Filter Co., Lond.; B. S., Lond.; Dr. J P. Bush, Bristol.

C.—Dr. F. J. Crawford, Lond.; Mr. T. S. Conisbee, Lond.; Mr. T. S. Carter, Leeds; Mr. J. Cantlie, Lond.; Corporate Medical Reform Committee, Lond., Secretary of; Mr. J. B. Cameron, Lond.; Dr. C. Childs, Lond.; Messrs. H. Cox and Co., Brighton; Mr. S. N. Corlett, Lond.; Messrs. H. and W. Cox, Leicester; Messrs. T. Christy and Co., Lond.; Mr. H. Cox, Lond.; Cortland Wagon Co., Lond.; Dr. H. Campbell, Lond.; Dr. J. Coulter, Lond.; Mr. D. Conway, Manchester.

D.—Dr. W. L. Dickinson, Mayfair; Dr. A. Davies, Lond.; Messrs. W. Dawson and Sons, Lond.; Mrs. Dowker, Helmsley.

E.—Mr. O. Edwards, Leominster; Examination Hall, Lond., Secretary of; Mr. J. R. Essex, Pontypool.

F.—Mr. C. L. Fraser, Berwick-on-Tweed; Messrs. Fry and Son, Bristol.

G.—Mr. G. P. Gaskell, Lond.; Dr. R. Gil, Malaga; Mr. Gustav Filscher, Jena; Mr. J H. Goldwin, Rochester; Mr. P. O. Glynn, Athenry; Gloucester General Infirmary, Secretary of; Guest Hospital, Dudley, Secretary of; G. H. W. H., Cheltenham.

H.—Dr. W. S. Hedley, Lond.; Mr. O. Host, Eastbourne; Harveian Society of London, Secretary of; Mr. G. H. Hunter, Haughley; Dr. J. Hinshelwood, Glasgow; Humphreys, Ltd., Lond.; Mr. Hoff, Lond.; H. M. W., Wickhambrook; House Surgeon, Hampstead; Dr. T. H. Hime, Bradford.

I.—Insurance Co., Birmingham.

J.—Mr. R. Jones, Liverpool; S. S. Jackson, Alnwick; Dr. H. M. Jones, Lond.; Messrs. A. Jacob and Co., Lond.; *Journal of Medicine and Science*, Portland, U.S.A., Editor of; Dr. J. Jones, Exeter; Mr. J. Johnstone, Pulborough.

L.—Mr. J. D. Lloyd, Chirk; Dr. Leech, Manchester; Lithanode Electric Storage Co., Lond.; Messrs. Lupton Bros., Burnley; Messrs. B. S. Lloyd and Co., Lond.

M.—Mr. A. Moore, Colwyn Bay; Miss Manwaring, Banbury; Middlesex Hospital, Lond., Secretary of; Dr. McMunn, Crouch End; Dr. C. R. Marshall, Cambridge; Dr. Morrier, Salisbury; Mr. H. Marsh, Lond.; Medical Society of Victoria, Melbourne, Secretary of; McGill University, Montreal, Librarian of; Messrs. Mather and Crowther, Lond.; Mr. R. Morison, Newcastle-on-Tyne; Maltine Manufacturing Co., Lond; Miss Mackenzie, Nairn; Dr. J. Magill, Lond.; Medical Defence Union, Secretary of; Mr. C. Martin, Edgbaston; Mr. J. Y. M. McAllister, Lond.

N.—Norfolk and Norwich Hospital, Secretary of.

O.—Dr. H. Oppenheimer, Lond.

P.—Mr. W. Potter, Melbourne; Dr. J. P. Parkinson, Lond.; Dr. H. P. Potter, Lond.; Messrs. J. B Petter and Sons, Lond.; Mr. Y. J. Pentland, Edinburgh; Messrs. Parke, Davis, and Co., Lond.; Messrs. F. W. Potter and Co., Lond.; Parish of St. Giles, Camberwell, Clerk of; Prince of Wales' Hospital Fund for London, Lond., Secretary of; Mr. F. L. Philp, Weston-super-Mare; Mr. L. Pick, Lond.

R.—Dr. H. Rayner, Lond.; Royal Free Hospital, Lond., Secretary of; Mr. R. H. Rowell, Houghton-le-Spring; Mr. W. J. Rogers, Hampshire; Royal Ear Hospital, Lond., Secretary of; Messrs. Ridges and Sons, Wolverhampton; Roebach Springs, Ltd., Lond.; Royal Southern Hospital, Liverpool, Secretary of; Dr. G A. Reid, Southsea; Royal Halifax Infirmary, Hon. Secretary of; Rochford Union, Southend-on-Sea, Clerk of; Royal Medical and Chirurgical Society, Lond., Secretary of.

S.—Dr. S. H. Snell, Gravesend; Dr. A. S. Smith, Huddersfield; Mr. J. Startin, Lond.; Society of Apothecaries of London, Secretary of; Sociedad Propagandista del Clima y Embellecimiento, Malaga; Dr. D. W. Samways, Mentone; Dr. B. Smith, Lond.; Mr. F. E. Serase, Lond.; Mr. H. W. Scriven, Lond.; Sir J. Struthers, Edinburgh; Messrs. J. Scott and Co., Lond.; Smoke Distributing Mouthpiece Co., Belfast; Mr. G. Slater, Sheffield; Mr. T. Smith, Lond.; Dr. A. Stewart, Manchester.

T.—Mr. J. Timewell, Lond.; Miss E. F. Twisden, Lackfield; Treatment, Lond.

V.—Mr. J. W. Vickers, Lond.; Victoria Carriage Works, Lond.; Vejos, Ltd., Lond.

W.—Dr. D. Walsh, Lond.; Dr. E. A. Waldert, Philadelphia; W. H. F., Lond.; Mr. S. Wand, Leicester; Messrs. Willows, Francis, and Co., Lond.; Worcester County and City Lunatic Asylum, Medical Officer of; Messrs. Wills, Lond.; *Wiener Klinische Rundschau*, Vienna, Editor of.; Mr. O. Williams, Burry Port; Messrs. Willing, Lond.; Mr. M. S. Wilson, Lond.; Dr. Walsh, New Ross; Mr. R. Willson, Oxford; Mr. W. Wylerworth, Hackney.

X.—X., Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. H. L. Albert, Lond.; Aston Hall, Sutton Coldfield, Secretary of; Alternate, Lond.; Alpha, Lond.; Messrs Archer and Parain, Stockton-on Tees; Mr. S. E. Atkins, Pinhoe; Ambulance, Lond.; Dr. E. Allen, Hawes.

B.—Mr. T. W. Brimacombe, Kingswood; Mr. A. J. Bulger, Ettingshall; Mr. Blasson, Bourne; Dr. R. S. Betts, Bournemouth; Mr. W. R. Bates, Addingham; B. B., Lond.; Messrs. Burgoyne, Burbidges, and Co., Lond.; Mr. T. Buchanan, Whitelaw, Glasgow; Mr. M. Buchner, Lond; Mr. M. L. Bensuson, Lond.; Box 10, Truro; Dr. Breyfegle, San Francisco; Miss backhouse, York.

C.—Mr. T. D. Cooke, Bexhill-on-Sea; Centum, Lond.; Cymro, Lond.; Confidential, Lond.; Mrs. A. Chapman, Lond.; Cygni, Lond.; Sir. J. Crichton-Browne, Lond.; Surgeon-Lieut.-Colonel W. L. Chester, Netley; Dr. J. Cooke, Lincoln, Canterbury, N Z; Mr. J. Carter, Lond.; Messrs. J. W. Cooke and Co., Lond.; Mr. S. Crossley, Blackburn; Clarendon, Lond.

D.—Mr. J. Diggens, Lancaster; Devon and Exeter Hospital, Exeter, Secretary of; Dorchester Asylum, Medical Superintendent of; Mr. W. Dickinson, Middlesbrough; D. G., Lond.; Miss B. Dowrie, Lond.

E.—Experience, Lond.; E. H., Manchester.

F.—Mr. W. P. Flynn, Eastbourne; Major Fernandez, Folkestone; Falona Food Cereal Co., Lond.; Fides, Lond.; F. W. B., Lond.; Messrs. Fletcher, Fletcher, and Co., Lond.; Mr. T. Webb Fowler, Coventry; Mr. Fraser, Clitheroe; Mr. A. C. Farrington, Shellanger; Dr. R S. Ferguson, Calne.

G.—Dr. L. Gordon, Lond.; Genuine, Lond.

H.—Mr. W. W. Hoare, St. Albans; Mr. W. Heap, Liscard; Mr. J. Heywood, Manchester; Haydock Lodge, Newton-le-Willows, Superintendent of; H. H., Lond.; J. Henry, Rochdale; Mr. J. Hart, Lond.

J.—Mr. J. K. Jones, Llanrhaiadr; Mr. F. F. Jones, Llanfyllin.

K.—Dr. J. Kirkland, Quebec, co. Durham; Mr. A. Kelsey, Redhill; Kenilworth, Lond.

L.—Dr. W. Latham, Ashton-in-Makerfield; Lancs, Lond.; Dr. R. Lanphier, Alford; Mr. H. C. Linden, Compton Martin; Mr. H. B. Long, Soham; Mr. H. K. Lewis, Lond.; Mr. F. Leach, Lond.; Mr. J. Lilwall-Cormac, Burton-on-Trent; Mr. F. Leavy, Geraldton, Queensland; Levinge, Lond.; L. A., Lond.

M.—Dr. J. McNaught, Waterfoot; Mona, Lond.; Mr. H. Munday, Leighton Buzzard; M.B., Leeds; M D., Manchester; M. E., Lond.; Martis, Lond.; Mr. J. A. H. Mogg, Feckenham; Mountjoy Brewery, Dublin, Secretary of; Dr. J. McDonald, Belford; Mr. S. H. Merryweather, Skelton-in-Cleveland; Dr. Morris, Salisbury; Mr. A. H Minton, Week St. Mary; Medicus, Netherton; Medico, Liverpool

N.—Mr. I. Norris, Hurstmonceux; North Staffordshire Infirmary, Stoke upon-Trent, Secretary of; Nemo, Lond.; Northumbria, Lond.

O.—Dr. R. O'Callaghan, Winchcombe; Dr. S. Oliver, Mombasa, British East Africa

P.—Dr. C. S. Pethick, Woolton; Mr. E. Peacock, Nuneaton; Mr. E Phillips, Worsley; Partner, Lond.; Mr. B. L. Powne, Chard; Peritus, Lond.; Dr. Pollak, Johannesburg; Princeps, Lond.; Mr. M. Percival, Cambridge, N Z.; Parvus, Lond.

R.—Mr. J. Robinson, Kidderminster; Rex, Lond.; Mr. F. S. Reed, Weston Zoyland; Mr. A. B. Reck, Copenhagen; Dr. Richardson, Lond.; R. B. O., Lond.; Messrs. J. Robbins and Co., Lond.

S.—Mr. S S. Smith, Lond; South Devon and East Cornwall Hospital, Plymouth, House Steward of; Smedley's Hydro, Matlock, Secretary of; S. W., Lond.; Mr. P. B. Stoney, Miliom; Messrs. Sutton, Sharpe, and Co., Lond.; Sarcoma, Lond.; S'gma, Lond.; Dr. E. M. Spencer, Tavistock; Statim, Neath; Shrewsbury, Lond.; Sigmoid, Lond.; Mr. J. Spencer, Hetton.

T.—Mr A. G. Tribe, Treorky; T., Ipswich; Mrs. Townsend, Galway; Mr. J. Thin, Edinburgh; T. M., Lond.; Traveller, Lond; Mr. P. Turner, Lond.

V.—Victoria Hospital for Children, Chelsea, Secretary of; Vetus, Lond.

W.—Dr. Weaver, Aylesbury; Dr. J. Watt, Plumstead; W., Leeds; Dr. J. Wallace, Stonehaven; Mr. W. H. Warwick, Darlington; Dr. Williams, Bootle; Wirral Children's Hospital, Birkenhead; W. M. D., Lond.; Dr. H. Webster-Jones, Belvedere; Mr. W. Walker, Greenock.

X.—X. M., Lond.

Z.—Zeno, Lond.

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